

# THE CULTIVATOR.

NEW

"TO IMPROVE THE SOIL AND MIND."

SERIES.

VOL. V.

ALBANY, MAY, 1848.

No. 5.

## THE FARM OF E. PHINNEY, ESQ.

(Continued from page 107.)

**EDITORS CULTIVATOR**—In my last communication, I proposed to continue my notes on Mr. PHINNEY'S farming, under the following heads:

**DRAINING AND RECLAIMING SWAMPS AND WET LANDS.**—There is an extensive peat-meadow on the farm, the greater part of which has been reclaimed by thorough draining and cultivation. Mr. Phinney says that the only way to make these meadows dry and productive in valuable grasses, is to ditch around the margin so as to cut off the springs and receive the water which flows in continually from the surrounding uplands. It is the water flowing in underneath, and not that falling on the surface, that renders the land cold, wet, and unproductive. In order to effect this, he has a very thorough ditch around the margin of the meadow, which is filled with stones to within a foot or so of the surface; they are then covered with refuse hay, straw or sods, and the whole levelled off with the soil, so that the plow may pass over in cultivation. His meadow is very wide, and therefore he has another ditch through the centre, connected with the marginal ones by cross-ditches, and through these the water filters among the stones, and is carried off perfectly.

After this has been done, the wild grasses and other herbage are exterminated by thorough cultivation. If the meadow becomes dry enough during the season to plow, the turf is turned over as smoothly as possible and rolled down hard; in the winter a top-dressing of compost, made of loam and manure, half and half, 20 to 30 loads per acre, is carried on, and in the spring it is planted to corn, or some other hoed crop, without disturbing the sod. If the plow does not turn the sods smoothly over, the bog-hoe follows making the uneven places level. When the crop is taken off in the fall, the surface is loosened and made level with the hoe and harrow, and late in the fall, or just before heavy frosts set in to freeze up the ground, the land is stocked down to grass with a bushel of red-top and half bushel of herd's-grass seed per acre; the field is again rolled and the process completed, the seed coming up the next spring. If the land is intended for grass, without any previous cultivation, the turf is turned over with the plow at a favorable time during the summer; the hoe following makes all smooth, and late in the fall a dressing of compost, as before stated, is put on, the grass-seed sown, and the bush and roller complete the operation. If the ground is too wet and mired to admit the team and plow upon it in the summer, Mr. Phinney would advise to plow in the spring, when the frost is about three or four inches deep, and then cart on the compost-dressing, and, at the proper time, plant or seed down as may be most desirable.

Instead of this method of cultivation, the practice

has been, and is now pursued by some, to cover the meadows two or three inches thick with sand or gravel, and then a top-dressing of compost; but Mr. Phinney's experience is against this method of cultivation, from the fact that, after a year or two, the coarse, wild grasses are apt to work up through the covering, and entirely supplant the cultivated grasses. The whole must then have another covering or be abandoned as worthless. The expense of this system is also much greater than that pursued by Mr. Phinney.

Considerable difficulty arises in the cultivation of this kind of land, from its being too loose and open, or spongy; and hence it is considered of much importance to keep the inverted sod undisturbed in the cultivation; as by this means a more firm and compact surface is formed, upon which the team may work without mirring; and, the dressing of compost also helping to fill up the pores that may be open on top, affords greater facility for the fine roots of the cultivated grasses to expand more readily, and fully occupy and cover the ground. In five or six years the wild grasses may begin to appear; in which case the land is again broken up and managed as before. In this way heavy crops of corn and roots, and an immense burden of hay, may be raised on these reclaimed meadows.

There is another field on this farm, I should judge of eight to ten acres, of oblong shape, the sides dishing towards the centre, and the whole moderately descending lengthwise, which he has now in hand for draining. It is naturally a wet, unproductive, *swaley* soil, resting on an impervious hard-pan at about two feet below the surface. A marginal ditch, three feet wide and three deep, is made on each side of the field through its whole length, which cuts off the springs, and receives the water flowing in from the uplands; another parallel with these runs through the centre of the field, and the two former are connected with the latter by cross-ditches occurring every two or three rods, by which means the water is carried into the lowest or centre ditch, through which it passes off the field. These are all filled with stones two feet deep, which are covered, first with shavings, refuse litter or sods to keep the dirt out from the stones, and then with earth so as to make all smooth and level. The surplus water is thus carried off perfectly, as may be ascertained by holding the ear near the surface, over the drains, when the water may be distinctly heard filtering through among the stones.

This piece of drainage must prove a profitable investment; because the land, from its situation, receives the surface-wash of many highly cultivated acres on each side, the whole value of which will now be retained—the land being drained with *covered* ditches—

and, with an occasional light top-dressing of compost, must inevitably cut a heavy burden of grass, of fine and thick bottom, for many years to come. How many acres of land may be found, the whole country over, precisely in the condition of this field, where quite an outlay even, would prove a judicious and profitable investment?—the more profitable from the fact that, while in their cold and wet condition, all the surface-wash of the surrounding uplands, often times extensive, is wholly lost; it might be made available by thorough underdraining, and would of itself keep the land so receiving it highly productive.

**ORCHARDS AND THEIR CULTIVATION.**—There are two bearing orchards on the farm. One, planted about twenty years ago, contains some five hundred trees, mostly of the Baldwin apple, a variety that flourishes best on his soil and location; and the other, ten or twelve years old, contains between three and four hundred trees of choice winter sweet apples. The ground upon which the Baldwin orchard is planted, has a south and southeast exposure, and was, originally, in a perfectly wild and unsubdued state, covered with stones and shrub-oaks, pines and other bushes. Hundreds of tons of these stones were put into the ditches for draining the peat-meadow, towards which the orchard descends. After the obstructions to cultivation were removed from the ground, a light, free rich loam was found, resting upon a gravelly, and in some places, ledgy bottom.

The sweet apple orchard has, I should say, an eastern exposure, and, for skilful pruning, healthiness and vigor of the trees, presents an appearance far superior to anything of the kind I had before seen.

In reply to the inquiries of the Hon. John Lowell, several years since, Mr. Phinney says:—"Most of my trees were taken from the nursery in November, the roots placed in trenches, and covered with dirt until the following spring. This was done in order to avoid the necessity of setting them out before the ground had become dry and warm. If left in the nursery till spring they are seldom or never taken up till the sap has begun to flow. When removed after this takes place, the check occasioned by the removal, if not fatal to the tree, often injures its future growth. The best time to take up trees is unquestionably when the sap is least active. If taken up late in autumn, and the roots secured from sun and air, they may be kept with perfect safety until the middle of May, and planted out at this time with proper care, and as near the surface as possible, vegetation will commence almost instantaneously; they will not require to be supported by stakes, and will grow nearly as much the first as in any future year."

While the trees were young and the branches small, and at the season when the sap is most freely flowing, and the growth most rapid, the operation of pruning has, mostly, been performed by Mr. Phinney personally, and the orchards now show the hand of skill and judgment in their training. Those branches which tended to shoot out horizontally, or nearly at right angles from the trunk, were left to grow; while those which inclined to grow more erect, or at an angle of 45 degrees, were taken off—the whole operation being so managed as that no limb should shade any other limb, and at the same time an eye was kept to the proper and equal balance of the top.

By this mode of pruning the tops are spread out horizontally from the trunk, thus admitting the sun to exert his genial influence in the perfecting and ripening of all the fruit; with the further advantages that it is gathered with greater facility, and the limbs are much less liable to split off from the trunk, when loaded with fruit, than those rising to an angle more acute. In the former case, the limb may bend and sway con-

siderably, without straining very hard on the trunk, while in the latter, the strain commences almost as soon as the limb is inclined to bend with its load.

Probably the principal cause of the remarkable vigor and healthiness of the trees, is to be found in the fact that the land is kept in constant cultivation, no grass or weeds being permitted to grow in the soil. It is not thought desirable to manure the orchards heavily, as by this means they may be forced too much; but the land receives a light dressing of compost each year, and here his crops of carrots, parsneps and other roots—of which he raises large quantities—his squashes, pumpkins, melons, &c., are mostly grown. Corn is also planted to some extent.

The trees stand in straight rows, both ways, about two rods apart. The manure is plowed in, great care being used not to wound the trees above ground, and I noticed that no signs of injury to the bark were any where to be seen. No particular attention is paid to the roots; if one happens to come to the surface it is cut off, which only causes new fibres to shoot out with greater vigor. It is considered that root pruning, to some extent, is beneficial rather than otherwise.

A few years since, the mice girdled quite a number of the trees badly, in the Baldwin orchard, and in order to save them, large scions were prepared and inserted in the bark below the wound and connected with the bark above, so that the sap might flow up from the roots into the top. The trees have done remarkably well and are good bearers; the scions having grown so as to form solid wood all round. In a few instances the roots were so badly mangled that four small trees were set out around the trunk, and the tops of them inserted into the bark above the wound. They have grown to a diameter of four to six inches, and support the original tree perfectly.

A young orchard, with a northern exposure, has recently been set, of several hundred trees, at the distance of fifty feet, each way, which is considered near enough. In a few years the ground will be shaded sufficiently, and as the land is designed to be under constant cultivation, the crops raised upon it will be more valuable. Between these are set peach trees, which come to bearing soon, and are out of the way before they will interfere with the apple orchard. The ground was taken up from a wild state, covered with stones and bushes, and, notwithstanding that two coats of the stones have been removed, the last plowing has brought up another, that of itself gives the field a most formidable appearance. In three or four years more they will all be removed, and a light, free and productive soil obtained, well adapted to the raising of roots and vines. Besides these orchards, there is an abundant supply of other choice fruits, such as pears, plums, quinces, &c., and extensive graperies, which I should gladly notice more particularly did my limits permit.

**BREEDING AND FATTENING SWINE.**—I have before remarked that Mr. P. is not, just now, doing much in the way of rearing swine; and of course I had not the opportunity of much personal inspection in this heretofore important department of his farming. His long and extensive experience in this business, however, entitles his opinions to much consideration; and a passing notice of them may not be without interest to some of the readers of the Cultivator.

His stock of swine, for several years past, has numbered about one hundred and fifty of all ages; and his slaughtered hogs have been celebrated, in Boston market, for their great weight and fine quality. Every attention has been paid to the manufacture of manure from this large stock, the pens being supplied liberally with peat-mud, and other materials for the purpose; in return he has received from this source some 500 loads annually of excellent compost.



He prefers the Mackay hog to all other breeds that he has known, for their early maturity, depth of carcass, and great weight in the more profitable parts, thinness and whiteness of skin, &c. By breeding in and in, they had become enfeebled in constitution, and it became necessary to cross them, somewhat, with other breeds in order to remedy the defect. He is now crossing them with the Suffolk breed, and, judging from the few specimens of this cross which I saw, I should say that it produces a hog of desirable properties in every respect. The Suffolks are remarkable for thrift, vigor of constitution, early maturity, &c., but have not quite the depth of carcass, I should think, of the Mackays. So far as my experience goes, I should consider this depth of carcass a very essential point. I have invariably found, in my pens, that a hog of great roundness of form does not, at killing time, open well. Another recommendation, as I consider it, these hogs are perfectly white. If the pigs are to be killed at the age of nine months, Mr. Phinney would advise that they be kept as fat as possible all the time; but if intended for killing at the age of fifteen or eighteen months, they should not be full-fed for the first ten or twelve months.

Upon this subject he says: "To satisfy myself of the benefit of this course, I took 6 of my best pigs, 8 weeks old, all of the same litter, and shut them in two pens, three in each. Three of these I fed very high, and kept them as fat all the time as they could be made. The other three were fed sparingly, upon coarse food, but kept in a healthy growing condition, till within 4 or 5 months of the time of killing, when they were fed as high as the others. They were all slaughtered at the same time, being then sixteen months old. At the age of nine months the full fed pigs were much the heaviest, but at the time of killing, the pigs fed sparingly for the first ten or twelve months, weighed upon an average, fifty pounds each more than the others. Besides this additional weight of pork, the three 'lean kine' added much more than the others to my manure heap. These results would seem very obvious to any one who has noticed the habits of the animal. In consequence of short feeding they were much more active and industrious in the manufacture of compost, and this activity at the same time caused the muscles to enlarge and the frame to spread, while the very fat pigs became inactive, and like indolent bipeds, they neither worked for their own benefit nor for that of others."

The pigs intended for killing at fifteen to sixteen months, are kept upon light feed for ten or twelve months, and in the summer green clover, cornstalks, weeds, &c., are thrown into the pens, daily. The remainder of the time, until slaughtered, they are full-fed upon Indian or barley meal, in equal quantities with potatoes, pumpkins or apples, the whole being thoroughly and nicely cooked and salted, and fed about blood-warm. It is considered, from repeated experiments, that two dollars worth of material, thoroughly cooked, will make as much pork as three dollars worth of the same material, given in a raw state.

Upon the subject of care and feeding, Mr. P. says: "On regular and systematic feeding, and clean and dry bedding, the success of raising and fattening swine very much depends. A faithful feeder, also, who has some skill and taste, and withal a little pride of vocation, is indispensable. Homer informs us that much of the success of Ulysses in rearing his fine hogs, was to be attributed to his faithful Umeus, whom the old soldier styled god-like swine-feeder."

THE IMPORTED STOCK OF THE MASS. SOCIETY.—In addition to twenty or thirty cows, kept for supplying milk for the city of Boston, is the imported stock and their offspring, belonging to the "Massachusetts

Society for promoting agriculture," which are kept on this farm. This ancient and truly honorable Society, have set the rest of us an example worthy of all imitation. They have formerly spent thousands of dollars in the shape of premiums on field crops, the best cultivated farms, &c.; but finding this course too frequently attended with unsatisfactory results, from the fact that premiums were often sought after merely from the consideration of dollars and cents, rather than a spirit of enterprise in agricultural improvements—thereby giving rise, it is feared in too many cases, to the practice of deception—the trustees resolved to try a new and different appropriation of their funds.

They accordingly employed a competent agent in Scotland to purchase four cows and a bull each, of the Ayrshire and North-Devon breeds, the progeny of which are to be distributed among the several County Agricultural Societies, free of charge, on condition that they shall be kept in the county for the improvement of its stock. The oldest Society is entitled to the first choice of a bull and heifer of the offspring, and then the next oldest, and so on. These young animals are not allowed to go from under the care and supervision of the State Society, until they are of suitable age to be put to service.

The trustees are of opinion that for dairy purposes, there is no stock so well adapted to the soil and climate of Massachusetts, as the Ayrshire and crosses of them upon the common stock of the Commonwealth. Mr. Phinney says:—"From what I have seen and known of this and other imported breeds of cows, I am satisfied that as a dairy stock for New England, there is no breed in this or any other country so valuable as the Ayrshire. They are quite as hardy, and endure our cold weather as well as our native stock. They are of medium size, with enormous milk-vessels, and withal, a capacity for converting their food to milk much beyond any breed that I have known."

From the specimens of Ayrshires that I had seen before visiting this farm, I had not formed so favorable an opinion of the stock as Mr. Phinney expresses above; but I must confess that I was very agreeably surprised on viewing this herd. The cows are in every respect, fine models of what a dairy cow should be; their udders are very broad and reach far forward, with remarkably wide spread teats, and give every indication of being deep milkers. I was particularly pleased with the cow "Jennie Deans," a perfect model for the dairy, and a perfect picture, which it would be difficult for an artist to flatter. The celebrated cow "Young Swinley," purchased of Capt. Randall, of New Bedford, and whose dam "Swinley" "took more prizes than any cow in Scotland," is also a fine animal.

The North Devons will be great favorites with the farmers generally for their beautiful, deep, mahogany color, and fine silky coats, their hardness of constitution, fitness for the yoke, and tendency to fatten easily. I do not wish to forestall the judgment of those more particularly interested, by a comparison of the two breeds, and therefore will not institute any.

It is truly fortunate that this stock has come under the care of one of so much skill and judgment, in the matter of their treatment. There is nothing like pampering or stimulating with grain at all allowed in feeding, a fact that I particularly noticed, being in and out of the barns frequently during my visit, but all the good hay they will eat up clean, and a generous mess of carrots, daily, is allowed to each animal. They are also kept perfectly clean; in fact cleanliness, and freedom from all waste of fodder, are the order of the day in every department at the barns. Regularity in feeding and milking is also strictly observed.

The calves are learned to drink milk fresh from the cow by the time they are a week old at the farthest,

which is continued to them ten or twelve weeks. In the meantime they are encouraged to eat a little fine hay and nibble at a few carrots, which is of essential service in weaning them from milk.

I have said that the honorable board of trustees have set an example for us all to imitate. Here is certainly an object worthy the consideration of other State Societies; and I would particularly call the attention of my agricultural brethren in Vermont to the importance of the subject. We have now a State Society in embryo, with no definite plan of action before us, and why cannot something of this kind be presented and carried through? The State is, and must ever be, eminently a dairying and stock-growing region, and hence the importance to our farmers of an improved race of cattle. There is too much reason to doubt the utility of premi-

ums as they are often paid out; because the statements of competitors are so defective, and generally so unsatisfactory, in establishing clearly defined facts of general utility. It seems to me, however, that in the improvement of the stock of a region, like that contemplated by the Massachusetts Society, money may be expended that shall prove of constantly increasing utility. There is evidently a deep and growing interest in the promotion of our agriculture, felt by men of intelligence and influence in all parts of the State; and it is to be hoped that a sufficient concert of action may be realized, whereby our State Society—availing itself of the *past experience* of the Massachusetts Society—may enter at once upon the improvement of this commanding interest.

F. HOLBROOK.

Brattleboro, Vt., March 10, 1848.

### "RUNNING OUT OF VARIETIES."

UNDER this head we published a communication in our March number from H. A. PARSONS, Esq. Without intending to enter at this time into a detailed discussion of the subject, we think it proper to state a few of the reasons why we dissent from some of Mr. P.'s conclusions.

He is mistaken in supposing we had expressed the opinion that plants, under any circumstances, "do not degenerate." This is not our position; but we hold that plants have no *natural* tendency to degeneration. Mr. P. on the other hand, if we understand him, believes that all plants have an *inherent* tendency of this kind—that degeneracy results from an original, or constitutional principle. He thinks "the science of botany and vegetable physiology," prove that any plant continued from "the same seed on the same soil," will "degenerate till it becomes extinct."

That degeneracy may follow from growing a plant "from the same seed on the same soil," is not improbable; but does this consequence ensue from the natural decline of the species or variety to which the plant belongs, or from the exhaustion of the soil and unfavorable external influences? *This is the question.*

Let it be remembered that every plant requires its specific food; and that each successive crop, or generation of the same kind of plant, takes something from the soil. Hence it necessarily follows that this loss must be supplied, or exhaustion will follow; and as the food required by the plant is lessened, it is evident that the amount of produce will be lessened in a corresponding ratio. But is it proper to say that a decline of this kind, is the result of any law of "botany or vegetable physiology?" But though Mr. Parsons has told us that such a law exists, he has not told *what* it is, or where it may be found, as expressed or understood by those who believe in its validity.

It will be observed that the theory advocated by Mr. Parsons applies to "*any* plant," including not only those which are propagated by buds, bulbs, or tubers, but all others, whatever may be their mode of reproduction. But without any reference to the persons who have given credence to this theory, let us ask, is it sustained by facts? Is there anything within our knowledge connected with the cultivation or growth of grains, fruits or vegetables, which can constitute a basis for such a theory? Take wheat, for example. Some of the varieties held in highest estimation, are known to have been cultivated in the districts where they are now found, for several centuries; and a variety cultivated in Egypt, (the *Triticum compositum*) has

been grown on the banks of the Nile for more than *three thousand* years. There are several facts that establish this conclusion; but the following may be taken as a *demonstration*: The ancient people of that country, sometimes placed small quantities of wheat in the embalmed bodies of their dead. In several instances wheat has been taken from mummies, which, from hieroglyphical records connected with them, were known to have been interred for the long period mentioned; and this wheat on being sown has vegetated, and been found to be identically the same kind as that grown in Egypt at the present day! How long a time is required for this kind of plant, "grown from the same seed on the same soil," to "become extinct?"

But Mr. Knight believed that some old kinds of pears and apples had become unprofitable on account of their constitutional decline. Were he now alive, he would have sufficient evidence that his theory would not apply to the kinds mentioned by him. The Autumn Bergamot is said to be the oldest variety of pear known, having been cultivated by the Romans two thousand years ago. Mr. Knight thought it was about to become extinct. In France and other parts of Europe it now does well, and in this country, according to Downing, it grows vigorously, and bears good crops. The Brown Beurré, St. Germain, Chaumontelle, and White Doyenné, (Virgalieu or St. Michael,) are all old kinds—some of them have been known for two hundred years—yet all produce well, in good soils, in this country, and are said to produce better in France than they did several years ago. The White Doyenne, which from having failed around Boston, was taken by some as an evidence in support of Mr. Knight's theory, is considered in the Genesee valley (according to a statement of J. J. Thomas, in the March number of the Horticulturist,) one of the most productive, hardy and healthy varieties there known.

Of apples, the Golden Pippin and Nonpareil are very old sorts, and were supposed by Knight to have "run out." The former has been cultivated for nearly two hundred years. It is well known that these kinds flourish well on proper soils in this country. We have seen the fruit of both varieties in the highest perfection; and even in England the failure in Mr. Knight's time was only partial, and by improved cultivation the former productiveness of the kinds has there been restored.

Take an example of another kind:—The common variety of red currant has been propagated by buds or scions from a time the memory of man goeth not be-



yond; and the same is true of several kinds of grapes, and also of roses. Have they any less constitutional vigor now, than at the earliest period of which we have any account of them? Where they are put on proper soil and receive proper training, they flourish well. How much longer must this system of propagation be continued, before the varieties will "become extinct?"

Mr. Parsons refers to the potato. He thinks the natural tendency of varieties to wear out, has already exterminated many, and that others are fast failing from the same cause. The non-production of balls he regards as an evidence of decline in constitutional vigor. Our observation would not justify this conclusion. Some of the strongest-growing and most productive kinds have never been much inclined to produce balls, (or seed.) This fact is well known, and the idea has been taken from it, that it is an advantage to pinch off the blossoms from those kinds which produce them, in order to prevent the energies of the plant from being exhausted by the production of seed, and throw more force into the production of tubers. This course has been considerably practiced in England. The Merino or Long-Red, an old variety introduced from South America about fifty years ago, has never produced but few balls, and its vigor and productiveness is remarkable; whereas the Mercer or Neshannook, a kind originated in Pennsylvania at a comparatively late period, and generally spoken of as particularly susceptible to disease, produces plenty of balls. A person in this vicinity has raised potatoes from the balls of this kind for two years in succession, and they have all been diseased. Prof. Norton informs us that in Scotland the "cups," and those "*kinds which bear no apples, are in general least affected*" with the disease.

The decrease of the potato crop from 1843 to 1846, is supposed by Mr. Parsons to result from "a general degeneracy of the varieties now in use." Everybody knows that the deficiency in this crop is chiefly caused by the "potato disease," and the unavoidable inference, therefore, from Mr. P.'s language, is that the *disease* is the result of constitutional degeneracy, and that on this account the old kinds should be replaced by new ones, raised from seed. But does his own reasoning bear out the proposition? He cites the practice of farmers in Nova Scotia, "where," says he, "the finest potatoes were formerly grown." "They [the farmers of Nova Scotia] place little reliance on the introduction of tubers from abroad; their experience tells them that a reproduction from the seed-balls is the most sure and profitable. *And in no part of the world, probably, has reproduction been resorted to oftener than there.*" We have italicised the words composing the last sentence, because we wish that they should be particularly observed in connection with the FACT, (which we derive from a comparison of the various accounts given,) *that in no part of this country has the potato suffered more from disease than in Nova Scotia!* This is a sufficient comment on this point.

Again, if the disease was the result of constitutional weakness, should we not see evidence of such weakness in a feeble growth of the plant from the start? But instead of this it is certain that potatoes were never known to grow more vigorously, or present generally a finer appearance in their earlier stages, than in the seasons in which the disease has prevailed. The flourishing condition of the crop last season, up to the time when the blight of the tops first appeared, was the subject of general remark; and the growth of tubers was in most cases more than commonly great; but, with the exception of a few varieties, which from their hardness were in a measure exempted from attack, those which the disease found in an *unripened state*, perished. According to Prof. Norton it has been

so in Scotland. In general, he says, "the best crops on the best soil, have suffered most."

In examining the question as to the decline of varieties, we have compared many accounts from every part of this country where the disease is known, as well as those of the most authentic character from Europe; and it is certain that the evidence does not justify the conclusion that old varieties are most affected, or that any exemption in favor of new ones is exhibited.

The Highland Agricultural Society of Scotland, and the Agricultural Chemistry Association, have very thoroughly investigated this matter, and have collected a great amount of information, in the form of answers to questions which have been addressed to persons in various parts of Britain. Prof. Norton, in his essay on the potato disease, published in the Transactions of the New-York State Agricultural Society for 1845, has given the principal facts which the Highland Society had then collected on this point; all of which tended to show that varieties lately produced from seed, were as badly affected by the disease as any others. One man mentions that he had *sixty* varieties, only two to three years from seed, raised on his own farm, and they were all attacked with as much, and "in many cases more virulence than the older varieties." The information collected by the Chemistry Association is of a similar character. Twenty-five reports for 1845, state that potatoes recently raised from seed, were as much, and in many cases more affected by the disease than the old kinds; and only *two* individuals give it as their opinion that the new kinds have shown any exemption. The reports of the same Association for 1846, show still stronger against the assumption that seedlings have any superiority in resisting the disease.

We would not, however, discourage the raising of new varieties of fruits and vegetables. The greater the number of varieties, the better the chance of obtaining good ones by selection. But there is no value in new varieties merely because they are *new*, and we would not reject old ones, till we were confident they could be replaced by those which are *better*.

**MANGEL WURTZEL AND CARROTS.**—Dr. Thompson, who was employed by the Royal Agricultural Society to superintend some experiments in feeding stock, states that after trying mangel wurtzel for four successive years, he came to the conclusion that cows fed on it gave quite as much milk, but *much less* butter and cream than when fed on carrots or turneps; that when ewes were fed on mangel wurtzel the lambs did not thrive, owing to the poor quality of the milk.

A few years ago we had occasion to feed three cows during winter with several kinds of vegetables. We fed mostly with potatoes, giving each cow about a peck per day. On changing from potatoes to the same quantity of sugar-beets, the milk decreased, and was evidently of poorer quality. The beets were increased to half a bushel to each cow per day, and this brought up the quantity of milk to what it had been with the peck of potatoes; but the quality was still inferior, affording a less quantity of cream, and proportionately less butter, which was of a lighter color, of a less firm texture, and not so rich a flavor as that made while the cows ate potatoes. It is proper to say that about a quart of corn meal was given to each cow per day, through the whole trial.

**WIRE WORM.**—It is said that plowing late in autumn, and seeding two successive years with buckwheat, will destroy all wire worms in the soil. Another way is to summer-fallow very thoroughly, so as to starve them out, as they cannot subsist on the elements of soil.

## DETAILS OF OPERATIONS IN FARMING.

EDITORS OF CULTIVATOR—In your remarks "To Correspondents, &c.," in your December number, wishing a continuance "of facts," relative to American husbandry, culture of corn, &c., &c., you say:—"The experience and observation of hard-working, common sense farmers is wanted." Now I am really in doubt whether I have a right to class myself as a "common sense farmer," (it being but five years since I commenced the farming business;) but I do claim to know something of "hard work," and never having furnished anything for the pages of "The Cultivator," I will now give you my "experience and observation," in raising corn, on "plain" or prairie land.

In the spring of 1845, I broke up with only two horses, about twenty-four acres of new plain. About one half was very wet, and the balance consisted of small spots or knolls, timbered with burr-oak. I had previously made a ditch from north to south, through the lowest parts, and plowed eastward so as to drain into the main ditch. I planted first week in May. It came up well, grew finely, and I had nearly finished working it the first time, when severe frosts, from 25th to 30th, cut it down, and to all appearance killed it. Seeing all my neighbors replanting, I, on the 1st and 2d day of June, run a plow between the rows, and replanted on a line with the former planting. In a few days most of the first planting started again; the balance of the season was good, and I harvested about fifty bushels per acre.

In the spring of 1846, I was enabled to plow much deeper, enlarged my main ditch and deepened my cross ditches, shoveling out on each side, thus making ridges of loose earth from fifteen inches to over two feet in depth. The corn on these ridges was much superior to the rest throughout the season, and when I gathered it I found the ears so large and fine, I saved them for seed. They had sixteen to twenty-two rows, and from eight hundred to one thousand, and some few over a thousand grains each.

In the spring of 1847, I had a very large pair of stout horses, and plowed from 8 to 9 and 10 inches on the landside, which left the furrows about a foot deep when plowed. This year I added three acres more of the timbered land, leaving the trees standing, (about thirty cords per acre) but girdled them; planted first week in May, three and half feet apart, without manure at any time; put 6 to 8 grains in a hill, which was at the first and second hoeing thinned out to four stalks. It came up well; the season was wet, cold and backward; the ground was so lumpy I could not harrow the young corn as I intended and generally do; weeds grew, but the corn was yellow. I began plowing and hoeing the last of May, when there came a very heavy freshet; the farm below me was not ditched, and I could not drain it; the water stood from a few inches to a foot deep on several acres. Full two acres was killed out, and about half of the whole remaining crop was much injured. On 10th June I began plowing the driest parts with mould board plows, and a stout horse at each, turning the furrows from the corn; and plowed deep, up to the beam. It required two hoes to keep up with each plow; after this working the injured corn began to grow again. Last of June cross-plowed again, turning the furrows from the corn, and plowing as deep as a stout horse could plow it; put three hoes after two plows and kept up. From 5th to 10th July, plowed third time, using long-pointed "shovel plows," with a swingle-tree but sixteen inches long—plowed still deeper, and brought up subsoil generally; one hoe kept up with each plow,

running twice in a row. I like a shovel plow best—for the last plowing it cuts no corn roots, runs deeper, and leaves the earth more level and light between the rows. The season continued good, and the corn grew well until 12th September, when a hard frost killed all the green fodder, and slightly injured some of the corn. It was not sufficiently hard to gather until 10th October. Several persons told me it was the best piece of corn they ever saw. That injured by the wet never caught up with the other; that on the knolls was much the best, though the poorest ground. We have always estimated the field to contain thirty acres, three acres of which have never been plowed, and full two acres were killed out by wet—leaving twenty-five acres in corn, which includes the three of wood girdled, on which there was not over forty bushels per acre; and I husked out 2,573 bushels (shelled) sound corn, exclusive of small nubbins and soft ears, equal to 103 bushels merchantable corn per acre.

My potatoes have always been light, though planted on good soil. In the five crops I have raised, I never once got as many bushels per acre as I did of corn. Having planted them in April and first of May, I never had any to rot, though others complain much.

I mowed thirty acres of heavy timothy and clover, and made from sixty-five to seventy tons excellent clean hay.

My oats lodged and turned out slim. From five acres wheat, though much lodged, I got 142½ bushels, cleaned up, of excellent quality.

I killed forty-two fat hogs of my own raising, from twelve to twenty-one months old, and they averaged a little over 300 lbs. each; from which I put up full six barrels leaf-lard. In addition to pasturing my own stock of twelve head of cattle and five horses, I have received between \$70 and \$80 (the past season) for pasturing cows from the village.

You know that five years ago last autumn, I took this piece of land "in a state of nature," without fencing or clearing, except patches of plain, and without buildings or improvements of any kind—a log cabin of one room excepted. I have plowed altogether about seventy acres, and have fifteen to eighteen acres in plain pasture—the balance in wood, a part of which affords some grasses. My farm is, I believe, now rated higher per acre on the tax duplicate, including my buildings, than any farm in this county. In all my undertakings I have been my own director, manager and foreman, as well as a laborer; still I fear I have but slight claims to the enviable distinction of "a farmer," and am still desirous to learn of those who have had more experience or better success.

I am of opinion that the subsoil plow would be a great improvement on our plains. They are mostly broke up with but two horses, and very shallow, and a large portion of them frequently covered with water for weeks together in wet season of the year; but so long as these rich lands can be had from \$6 to \$12 per acre, and will produce fifty to sixty bushels corn per acre with poor plowing and poorer tending, (sometimes never plowed or hoed after planting,) I fear the introduction of subsoil plows will be delayed.

I am pleased to say that an increased number of subscribers have been obtained here for "The Cultivator," and also for the "Horticulturist." Having been a subscriber for the former from its first publication to the present time, I feel that to it I am mainly indebted for the success that has thus far attended my attempts at farming, and also in building, fencing, draining, seeds, &c., &c. J. S. COPELAND. Marion, O., Feb., '48.



## AGRICULTURE OF VERMONT.

EDITORS OF THE CULTIVATOR—I noticed that at the last meeting of the Oneida County Agricultural Society, Mr. Hitchcock in his address, spoke of the prejudice that still exists against what some are pleased to call book-farming. Farmers, he remarks, communicate the results of their experience in raising cattle, the most economical mode of manuring their lands, &c. "These results being printed, constitute the book against which such untenable and unfounded prejudice exists." If the results of the experience of the great mass of our *practical* farmers were printed, we should, I believe, have books quite as useful, though very different, from some we now have. That there are many interesting articles in our agricultural papers, no one will dispute. Those of Prof. Norton are of a practical character, and cannot well be too highly prized. But to follow the rules laid down by most of the writers would ruin nine-tenths of the farmers of Vermont. Gentlemen of large property, or high salaries, owning from 50 to 200 acres of land near a good market, may farm it *according to the book*, and talk learnedly of "rural architecture;" but in the latitude of Vermont, where the pitch-fork is kept bright seven months in the year, and where the farmer possesses no other means for the support of his family than what he obtains by his own industry, he finds it very difficult to manage his farm *according to the book*.

Our farming, I fear, is coming too much under that influence which governs our common schools. There is now twice as much expended annually in the support of teachers and building elegant school-houses, as was expended for that object 20 or 25 years ago. The public treasure was never more lavishly poured out, and yet our district schools do not flourish. The difficulty I apprehend can in some degree be attributed to the sources from which we draw our knowledge. Our teachers are taken too exclusively from our high-schools and colleges, and few of them have ever entered a district school house. They understand well the higher branches of science, but know little of first principles. Few of our *farmers* who write for agricultural papers, ever hardened their hands with hoe or pitchfork, or brought up the cows from a lowland meadow barefoot in a frosty morning.\*

But a small proportion of the farmers of Vermont are now able to make very extensive improvements, and it would be unwise to involve themselves in debt in their endeavors to imitate their more wealthy neighbors. Let the improvements commence upon scientific principles and progress gradually, and most of our impoverished farms may be made to produce bountifully at an expense far less than would be necessary to clear up a new farm, and erect the necessary buildings to make a family comfortable.

There is a spirit of improvement in the management of the farms of Vermont which, if properly directed, cannot fail to produce great and beneficial results; and no common observer of the times can fail to attribute the awakening of this spirit to the influence of our agricultural papers; and notwithstanding I may appear

a little opposed to *book-farming*, I should rejoice to see every farmer in Vermont a subscriber to the Cultivator. Yet until our population becomes more dense—lands dearer—labor cheaper, and farmers richer, farming upon the European plan cannot be profitably introduced or practiced here.

Our lands which were once productive, experiments have demonstrated can be made as productive, by proper management, as when first brought under the plow. The natural strength of the soil is first spent by the production of grain. To restore the strength of the soil requires the exercise of the faculties of the mind, and a change in the mode of farming. When and how this change is to be effected is the important inquiry—much more important than to know how a great crop of corn—a *twelve pound fleece* of "well-washed wool," or a great calf can be produced. For a good soil, with an abundance of manure, with a good team, and a good *hired* man, will produce the corn; seven pounds of gum and grease will produce the *well-washed fleece*; and two good cows a great calf.

My attention was first called to this subject by the removal of so large a portion of our population to the west. From 1820 to 1830, the increase of the population of Vermont was 40,000, from 1830 to 1840 only 11,000, and this increase was mostly confined to the manufacturing districts. It is also very evident that very few of those removed, have bettered their condition, after all the privation and suffering incident to a new settlement. I have lived sixty years on the farm on which I was born, and have witnessed the change in the mode of farming during this period, and the manner in which that change has been effected.

This was once a wheat-growing country. It produced as good wheat and as abundant crops as any of the western States. By a constant cropping of wheat for nearly half a century, the soil became too poor to produce it, and crop after crop failed. We then tried meslins [mixed crops;] then clear rye, and became bankrupt under buckwheat. A change in the mode of farming—starvation, or removal to the west, was forced upon us. The farms in general had become too poor to produce grass, and the farmer is too poor by the failure of crops to procure the small amount of stock the farms would then support. The utmost economy and industry were necessary to produce this change. The change has been effected, not by compost, for this, if they had known its value, the farmer had not the means to produce. The change has been effected, and those fields which were once covered with wheat are now covered with sheep. Vermont is now a stock and wool-growing State.

It would be well for the farmers of Western New-York to look to the history of Vermont. For the same process is now going on at the West that I have witnessed here. Their fields will not always yield their crops of wheat, and it would be much better to change, in some degree, from grain to stock, before the strength of the soil is entirely exhausted.

But I leave the New-York farmers to manage their own affairs, and attend to the farming of Vermont, which was my design when I commenced writing. From our system of direct taxation, I have been able to obtain a collection of facts, which if carefully examined will, I think, check that fever which has carried off so many of our most enterprising inhabitants. Some have been too much influenced, I fear, by the reports of the large crops of wheat which the Western

\* We think our friend Pettibone is under a great mistake in this assertion. We speak more particularly in reference to the writers for the Cultivator, of whom at least five out of six are men who "hold the plow," and handle both "the hoe and the pitch-fork." They belong to the same class with Mr. Pettibone. They are men who have supported themselves and their families by the tillage of the soil—men whose good common sense has led them to adopt every suggestion by which their condition could be improved, whether it was received orally or from books.—Eos.

lands produce. Many are ready to believe that farmer is most prosperous who turns off the greatest amount of produce, without taking into consideration the relation the produce bears to the capital employed. The table of statistics which I have prepared, shows the relative value of the improved lands in Vermont, and the value of stock and grain. All buildings and lots adjoining, not exceeding two acres, were appraised at their true value in cash, and set in the list at four per cent.; and all improved lands were in like manner appraised and set in the list at 6 per cent. All kinds of stock at a certain rate—oxen at \$2 each, cows at \$1.25, &c. From these lists we get the value of the improved lands, and the number of all kinds of stock.

The value of stock and grain I have put at a price quite low, at this time, but near enough to its true value for the object I have in view—the relation the value of produce bears to the value of improved lands. The stock was appraised on the first of April—the hay, being consumed, is not estimated; nor is the value of the dairy put into the account. I have valued oxen at \$25 each, cows \$15, horses at \$40, colts and young cattle in proportion. Yearling cattle were not appraised. I have put their number the same as two year olds. From this valuation, the stock, grain, and swine, exceed in value the value of the improved lands, without the buildings. The value of sheep at \$2 each, with their wool on, exceeds in value any other kind of stock. The value of stock is to the value of grain nearly as 9 to 2.

I have also taken the value of improved lands, and stock and grain in the different counties; and I find the value of produce in a reverse ratio to the value of improved lands. Addison County improved lands are appraised the highest of any in the State, being \$10 1-9. Caledonia County \$6 per acre. Yet Caledonia County, with one-fourth less acres, and two-fifths less in value, has in value of stock and grain over \$100,000 more than Addison County. The value of improved lands in Addison, Windham, and Caledonia Counties, stands

	Improved lands.	Produce.
Addison.....	\$10 1-9	\$7.50
Windham.....	7.31	8.53
Caledonia.....	6.00	11.32

Addison County produces more hay per acre than any other County in the State. It produces about 112,000 tons, which will furnish at least twelve tons of hay to each acre of plowed ground. This with the straw and corn stalks, will make sufficient manure to keep the soil in a high state of cultivation, without resorting to artificial means of making manure.

The lands of Vermont, particularly the western and northern portion, are well adapted to grazing. The deep rich soil of the northern counties produces abundantly of hay and grass; and the numerous rivers which flow into Lake Champlain, by overflowing the intervals, spring and fall, keep these flats rich without the application of manure. The Otter Creek and Battenkill rivers, which run nearly 100 miles near the base of the Green mountains, overflow their banks annually. These intervals produce heavy crops of excellent hay without any manure. The pastures on the hills and mountains afford good range for cattle and sheep; and the hill and mountain pasture, though of little value for entire farms, when connected with the flats and interval meadows, are nearly as valuable as the best lowland pasture. These rich hill and mountain pastures, can be purchased at from \$3 to \$8 per acre.

When we look at the low price of improved lands in Vermont, and their adaptation to the growth of cattle and sheep, we may as well expect a great outlay in making manure in Wisconsin as here. There are sections of Vermont that require more manure than can be made from stock, so long at least as the plow is used so much. There are less natural meadows, prob-

ably, in Windham County than in any other in the State; and that county is the only one that has, as far as I have been informed, offered a premium for the best heap of compost manure. There is, no doubt, more manure made in that County than any other in the State, or in all the other Counties. I have never seen a heap of compost in Addison County, which is considered naturally the best grazing County in the State. The value of stock there to the value of grain is eight to one. With all these natural advantages in favor of Addison, Windham County, with but 3,000 acres more improved lands, has 3,000 oxen, 4,000 cows and three year old cattle, and 200 horses, more than Addison County, and nearly twice as much grain.

These facts may, in the opinion of your able correspondent from Brattleboro, favor book-farming, while others, more intimately acquainted with the habits of the farmers on both sides of the mountain, will attribute this increase in the value of produce in Windham County to the industrious habits of the farmers on that side of the mountains; for there is, I think, twice as much labor performed annually by the farmers in Windham County, as is done by the same number of farmers in the counties of Addison, Rutland and Bennington.

But without going into the investigation of the comparative merits of different counties, if we look at the produce of the State as a whole, or by counties, it will appear that a greater value of cattle and grain is produced in Vermont, from the same amount of capital employed, than in any other State in the Union; and the amount of produce will, in the course of a few years, by means of the different lines of railroads now in progress, be doubled in value. J. S. PETTIBONE.

#### AGRICULTURAL STATISTICS OF VERMONT.

	State.		Addison County.		Caledonia County.	
	No.	Value.	No.	Value.	No.	Value.
Improved lands, 1,269,260 acres,.....	.....	\$10,594,561	.....	\$556,004	.....	\$556,004
Buildings, house lots, &c.,.....	.....	\$1,163,995	.....	600,847	.....	600,847
Mills and stores,.....	.....	809,450	.....	66,305	.....	66,305
Oxen at \$25.....	32,375	809,450	1,800	45,000	2,970	74,250
Cows and three year olds, at \$15.....	141,767	2,126,505	11,656	174,846	12,204	183,060
Two years old cattle, at \$10.....	45,016	450,160	3,227	32,270	4,173	41,730
Yearling do. at \$5.....	45,016	225,080	3,227	16,135	4,173	20,865
Horses, at \$40.....	51,702	2,068,080	4,451	178,040	4,674	186,960
Two year old colts, at \$25.....	7,151	178,775	516	12,900	.....	20,100
One year old do., at \$20.....	4,065	81,300	182	3,640	.....	10,520
Stallions, at \$200.....	91	18,200	3	600	.....	3,000
Jacks, at \$100.....	21	2,100	.....	.....	.....	.....
Sheep, at \$2.....	1,681,819	3,363,638	.....	.....	.....	.....
Swine, at \$2.....	203,800	407,600	177,635	355,270	57,694	115,388
Wheat at \$1 per bushel.....	465,800	465,800	14,305	28,610	18,991	37,982
Rye, at 50 cents.....	230,933	115,466	31,292	15,646	37,694	18,847
Barley, at 50 cents.....	51,781	25,890	11,427	5,713	1,800	900
Oats, at 25 cents.....	2,292,584	573,146	255	12,291	1,800	900
Indian corn, at 50 cents.....	1,119,675	559,837	141,794	70,897	3,243	1,621
Buckwheat, at 50 cents.....	298,416	149,208	95,304	47,652	52,350	26,175
Potatoes, at 12 1/2 cents.....	8,506,751	1,063,344	7,219	3,609	1,205	6,025
			440,697	55,012	1,060,841	155,331

Total value of the live-stock of the state, \$9,756,939. Total value of grain \$2,950,439. Value of live-stock in Addison County, \$846,105; value of grain, \$178,934. Value of live-stock in Caledonia Co., \$693,855; of grain \$340,855.

Average value of improved lands, with buildings, for the state, \$14.90 per acre; average value of the same for Addison County \$17.62 1/2 per acre—without buildings, \$10.11 per acre; average value of improved lands, with buildings, in Caledonia County, \$13.50 per acre—without buildings, \$6. Manchester, March 30, 1843.



## AGRICULTURAL SCHOOLS.

THE subject of establishing institutions for giving instruction in sciences especially connected with agriculture, is attracting much attention. It has been a mooted question (in legal phraseology) whether new institutions should be formed for this purpose, or whether the instruction should be given in our present colleges. Prof. C. U. SHEPHERD, of Amherst College, in his excellent agricultural address, delivered last fall at Springfield and Northampton, made some observations in reference to this point. He thinks it the duty and interest of the landowners of this country to lay a broad basis for the scientific training of the rising generation—that the *elements* of the physical sciences should be taught in our common schools—and that there should also be established a “class of higher institutions for the preparation of teachers, as well as for the thorough education in practical farming of those who have before them the prospect of managing large estates.” He proceeds to speak more in detail in reference to such a school as is required, and his observations, which we quote, are worthy of careful consideration:

“Many persons appear to think, that our college course can be so modified, as to fulfil at the same time, the literary and the agricultural requisition. It does not appear to me that such a plan is likely to succeed. Heretofore most certainly, whatever else the college has afforded, it has turned out few practical farmers. Even those, who enter as well drilled and expert in farming operations, by the time they reach the terminus of their course, if they do justice to the college studies, and become thoroughly imbued with the spirit of the place, become rather awkward on the farm; and it soon begins to appear, that to be college-learned, is to be farm-unlearned. And I hardly know of men more to be pitied, than those who from feeble health or any other cause, have failed in a professional or literary career (to prepare for which the college course is chiefly intended) and who are obliged to fall back upon the farm for a livelihood. In all the practical labors of husbandry, they seem to have lost the art of taking hold of things by the smooth handle; and their blunders in live-stock, are almost sure to make them the laughing-stock of their neighbors. Now there is nothing surprising in this, if we consider the object of college education. The college is not intended for persons who are to occupy themselves much with physical matters. Even the boys understand this perfectly well; and it is to be feared that not a few importune their parents to gain admission there from no higher motive than to get clear of muscular effort; though it is generally observed that such are equally shy of intellectual exertion. No: the college is the place for the training of persons, who, if they are ever to work at all, must do so through the medium of mind, as scholars, as statesmen, as clergymen, or in the medical or legal profession. Nothing can be more unreasonable than to suppose, that we see the practical use of the sciences to mankind in the lives of our college graduates. Why, the college course is chiefly made up of the study of the literature and philosophy of the ancients, to whom our sciences were a dead letter, and of the elements of mathematics and geometry, to which is added a sprinkling of metaphysics and logic, and considerable drilling in English composition and elocution. On these studies and good morals, the discipline and the honors of the college turn. Lectures are given indeed on some of the modern sciences, but less with a view to their bear-

ing on the arts of life, than to the purpose of intellectual discipline and general accomplishment. No teacher would be tolerated, who should more than incidentally allude to any common use, like that of economical profit, that could be made of them. The college is not the place for learning rules of thrift. It pre-supposes a degree of independence; and in cases where this is not enjoyed, it takes it for granted, that money-making is to be held as a secondary consideration with all who partake of its benefits. The college graduate is never to seek glory in wealth, but in knowledge, and in usefulness of a lofty kind to his fellow men. This I take to be the true theory of the college, and of literary life in general. Both hold themselves at the most respectful remove possible from all contact with matter, and the every day labors of men engaged in the arts. I might perhaps afford you an illustration of the truth of this representation. A president of one of these institutions on being shown through the physical department of another, the best endowed in natural sciences of any in the country, on taking leave of the distinguished professor, who had been his conductor, begged to know of what conceivable use to mankind were all such provisions! Here was a distinguished scholar, at the head of an American college, who had got so completely away from matter, as not to be conscious that a knowledge of its properties was of the least utility to mankind!”

“The time has fairly arrived, when society should understand what it has a right to expect from the college; when it should know this at least, that it is not the most likely place to look for amelioration in the practical arts, especially in that of agriculture. The college has enough to do to qualify for head-work. There must be some other institution in which young men can be taught to work on matter as well as upon mind. To send a lad to college whom you intend to make a farmer, is putting him on the wrong track. The four years spent there would be an episode, a parenthesis in the preparation for active life on a farm. I say not that it would disqualify him from leading the life of a gentleman, provided his means were sufficiently ample; but it would assuredly be a bad thing for him, ever to take off his gloves on a farm, after he had touched his diploma.\*

“I should shrink from the attempt even, to draw out the plan of such an institution as is required to meet the wants of this greatest of all the branches of practical industry. To frame such a scheme will demand no small share of deliberation and forecast. No institutions are now in existence upon which they can be directly modeled.”

We are happy to see that a bill has been introduced into the Senate of Massachusetts by Hon. J. T. BUCKINGHAM, for the establishment of the “Massachusetts

\* In these remarks upon the inadequacy of the college proper, for preparing persons for the practice of the arts, I trust that I shall not be thought wanting in a proper regard for these institutions. Having, either as pupil or teacher, passed the greatest part of my life in connection with the college, I can but accord to it the highest respect, and even filial affection; but this veneration is solely on account of the important and truly noble end it accomplishes, in laying the foundation of professional or literary eminence; and not on account of its direct service to the manual arts. These it never has embraced within its plan; nor is it easy to see how any change can ever be made in this respect, which shall fully answer the wants of practical men: although there is nothing to prevent the existence of an agricultural school in immediate connection with a college, whose scientific faculty might even assist in a school of arts, and in this way, materially abridge the expensiveness of such an institution.

Agricultural Institute." Mr. B. is Chairman of the Committee on Agriculture in the Legislature, and in submitting the bill referred to, he made an able report on the subject of agricultural schools in connexion with experimental farms. The same subject was also discussed at the weekly agricultural meetings held in Boston during the past winter. The general impression there seems to be that such institutions should be entirely disconnected with our present colleges and other literary seminaries. The Committee in the report observe:

"The project of establishing an agricultural school has, for many years engaged much of the public attention, and the committee believe that the time approaches, if it have not actually arrived, when the legislature may, with propriety, look upon it with favor, as a subject in which the honor and prosperity of the Commonwealth are involved. They have, therefore, found no difficulty in coming to the conclusion, that an institution should be founded forthwith, where agriculture may be taught as a science and practiced as an art; where new theories may be investigated and subjected to the test of experiment; and where principles, which have already received the sanction of successful practice, may be further inculcated and confirmed."

"We know that the mass of those who, from choice or otherwise, follow the calling of the husbandman, are anxious to be supplied with all practicable facilities for obtaining the knowledge which will enable them to develop the resources of the earth, and to enjoy all the fruits which intelligent and scientific labor is capable of producing. And they appeal to the wisdom and liberality of the legislature to aid them in their efforts to institute a school, where agriculture, in its most extended sense, with all its kindred arts and sciences, may be taught, practically and experimentally, on a farm devoted entirely to that purpose, and without any connection with any existing academy or college in which a classical education is the prominent purpose of instruction."

The bill proposes to incorporate Edward Hitchcock, Wm. B. Calhoun, Sam'l L. Hinckley and their associates, as a body politic, for the purpose of establishing "in some one of the towns lying on the banks of the Connecticut river, or in a town immediately adjoining such towns, an agricultural school and experimental farm, with the above title, the object of which shall be instruction in agricultural science, and improvements in all the arts connected with the practice of farming."

A resolution is appended to the bill, which provides that, when the officers of the said Institute have obtained subscriptions in cash or real estate to the amount of \$15,000, they shall receive from the State \$5,000; and at the end of one year another sum of \$5000; and at the end of two years from the date of the first payment, another sum of \$5,000—"said sum to be used only for the purpose of carrying on experimental farming and instruction in the arts and sciences connected therewith."

**AGRICULTURAL PAPERS.**—A correspondent of the Ohio Cultivator, states the case of a farmer who lost \$150 by neglecting to take that paper. He had taken it formerly, but concluded that he could do without it. After he had discontinued it, certain practitioners of Neurotomy on horses were traversing that State, and the paper cautioned the farming public repeatedly against the practice. But this farmer did not see these cautionary remarks, and suffered two fine horses to be operated upon, paying him ten dollars, which resulted in the entire ruin of his two horses. Farmers must not expect to be guarded against impositions, unless they inform themselves.

## Diseases of Animals, &c.

### Roup in Poultry.

This disease, frequently called in this country "swelled head," attacks both common barn-yard fowls and turkeys. The first symptoms are a watery fluid being discharged from the eye. The eyelids soon become inflamed and swell; and the swelling extends more or less over the head. A fetid discharge proceeds from the nostrils, which so obstructs respiration that the fowl is constantly sneezing and gasping. In bad cases one or both eyes are frequently destroyed. The disease is believed to be contagious, and as soon as a fowl is affected, it should be removed to some dry and comfortable place where there will be no liability of the malady being communicated to others. If many fowls are affected, it will be advisable to remove the whole of them, and wash their apartments with a strong wash of hot-lime. A writer in the English Agricultural Gazette, recommends as the best remedy, bathing the head with warm fomentations in which poppy-heads have been infused, and giving a preparation of goose-grease, (lard probably would do as well,) and chopped rue, mixed together—two tea-spoonsful for a fowl twice a day. For drink, the fowls are allowed water which has iron, or iron-rust and sulphur in it.

### Medicines for Cattle, Horses, &c.

Mr. R. S. Ransom, of Perryville, N. Y., writes that he had found much benefit from the use of the cattle-medicines prepared by Dr. C. S. Toms. His "Russian liniment" for bruises and sprains, is said to be not only valuable for horses and cattle, but for the cure of rheumatism, &c., in the human race. His "condition powders" are highly spoken of. Mr. S. observes—"The above medicines, coming as they do from a good farrier, I much prefer to trusting animals in the hands of ignorant and conceited quacks." Mr. R. states that he is no way interested in the sale of the medicines, but from having known them used for a long time in the vicinity where he resides, is induced to recommend them for the benefit of the public.

### To kill Lice on Cattle.

A correspondent of the *Mass. Plowman* states that the easiest mode of destroying lice on cattle, is to card the cattle till the card is filled with hair, then pour spirits of turpentine on the card, and card the cattle again—placing the card first on those places where the lice are most numerous. He says by following this course once in 3 or 4 days, the lice will disappear.

### Leprosy.

The same writer as above mentioned, gives the following receipt for the cure of a disease in cattle called leprosy:

Put a piece of lime the size of a goose egg, into a tight vessel—pour in four quarts of hot water, and cover the vessel with a cloth—I do not vouch for the truth of it, but it is said to be better than when the vessel is left uncovered. When it has become cool, turn off the clear water, and wash the disordered spots two or three times with it, which is all I have found necessary to work a cure.

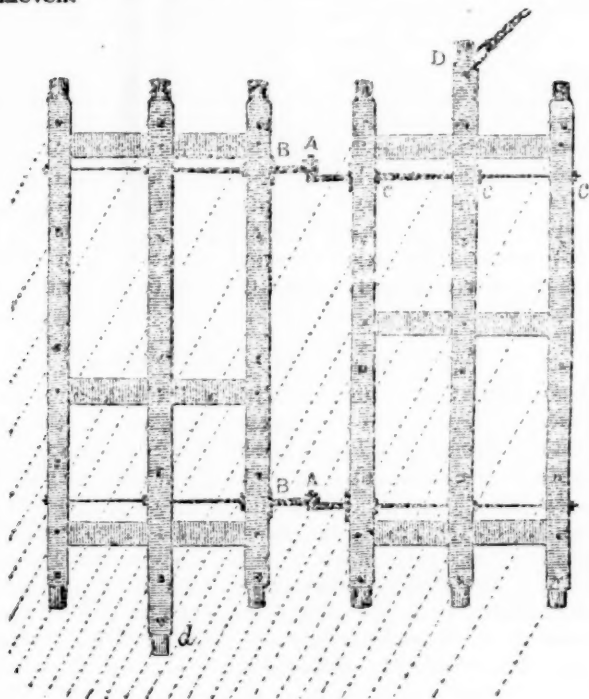
**HEAVES IN HORSES.**—It is said that horses may be greatly relieved, if not cured, by the use of chopped straw instead of hay.

**SALE OF HEREFORD CATTLE.**—At a late sale of the herd of T. Cooke, Hereford, (Eng.,) one bull sold for £142, (\$710.) another for £88, (\$440,) a yearling bull £56, (\$280,) and another for £52, (\$260)—one cow for £70, (\$350.)



## HINGE HARROW AND CULTIVATOR.

MESSRS. EDITORS—At your request I hasten to give a drawing and description of my Harrow and Cultivator, to which allusion was made in my communication in your March number upon the culture of corn. I do not know who to credit with the invention of my harrow. It was made somewhere in Jefferson County, N. Y., I believe, and I bought it of a man from that section. It is by far the most effective harrow I have ever used; doing as thorough work at once in a place as the old-fashioned harrows will at three times—particularly if the surface of the ground is somewhat uneven.

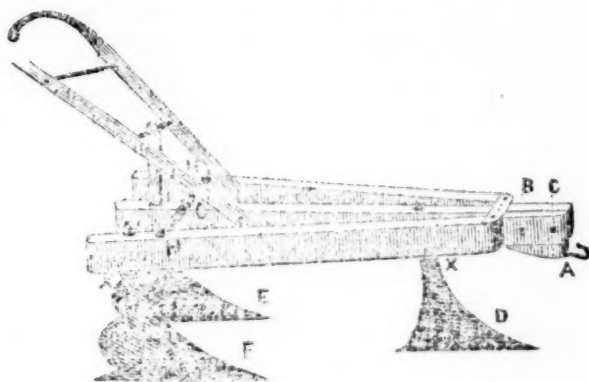


Hinge Harrow—Fig. 41.

**DESCRIPTION**—The harrow is composed of two pieces of frame-work connected by hinges. The bars or stiles are 3 by 3 inches of white-oak timber, and connected together by slats as represented in the cut. The ends of the bars are rounded and secured from splitting by iron bands. The hinges A A go together like common barn-door hinges; they come to a shoulder against plates of flat iron nailed on to the wood-work at B B. The hinges pass entirely through the frame-work—gradually tapering—with nuts screwed on at C C C. There are two points of draft, D d, which is quite an advantage; because when the teeth get dull or dubbed off by constant use in the direction D, it is only necessary to hitch on to the other point d, and you have sharp teeth again. There are thirty teeth in the implement, and it harrows down very fine; and yet it will readily be seen that no two teeth are so near together as to be troublesome about clogging. My harrow is 5 feet long, and 5 feet 3 inches wide; with teeth of 3-4ths iron. For harrowing in grain and grass-seeds, it may be made lighter—say of some light, smart timber not over 2½ inches square, and the teeth 5-8ths of an inch square.

The annexed cut represents my Cultivator. It is a patented implement, by Woods, Bates & Wells, somewhere in the State of New-York. An agent for selling rights passed through this town a few years since and sold the right of making and vending for this vicinity to a fellow townsman. At my suggestion, he made

some alterations in his patterns which I deem of importance. In the first place, the teeth are made longer from the frame-work to the ground, which obviates the objection of clogging, for now there is space for any impediment to rise along up the teeth and slip off, without getting bound in, at the point of contact of the iron and wood at X X. The space from the bottom of the wood-work to the bottom or sole of the tooth is 11 inches, while most cultivators have not a space of more than 6 or 8 inches. In the second place, the teeth are made fast in the frame with a large thread and nut on the top, the advantage of which will be hereafter noticed.



Cultivator—Fig. 42.

**DESCRIPTION**—The point of draft A, is the continuation of a wide, thin piece of iron, secured by two bolts B C; and by taking out the bolt C the point of draft may be raised or lowered,—thus altering the depth of the work—and other holes in the iron admit this bolt through it and make all fast. The forward tooth D is a double mould board. The teeth E F are single mould boards or miniature plows; and at weeding-time they are reversed, thus turning the earth and all large clods, that might otherwise roll over on to the young and tender corn, away from the hills, thereby enabling the holder to work up close to them without danger of burying them up. At the next hoeing, the teeth are replaced, as seen in the cut, and the earth is turned towards the corn. The frame may be expanded, or contracted, at pleasure, by loosening the nut and bolt at G, and putting through other holes in the straps of iron H H. As the frame work is expanded or contracted so must the points of the teeth E F be altered to correspond, or travel in a proper line; and it is only necessary to put them in the right direction, and then screw the nut on top down snug, and the teeth will be kept in their proper place. The points of the teeth are screwed on to the mould board the same as any plow-point is, and when they become worn may be taken off and new ones substituted. The cut represents the teeth as coming to a sharp point; but, in fact, they do not; they are squared off like a plow-point.

Brattleboro, Vt. March 28, 1848. F. HOLBROOK.

THE OIL OF BIRCH is said to be used in Russia for tanning leather; particularly for the skins of sheep, goats, calves, &c. Dr. Holmes, of the Maine Farmer, states that the peculiar aromatic smell of this oil, which is very pleasant, has the effect to keep out moths and other insects. He suggests that as there are plenty of birches of various kinds in Maine and other portions of the northern section of the country, the manufacture of this oil might be made a profitable business.

## HORTICULTURAL DEPARTMENT.

CONDUCTED BY J. J. THOMAS.

## Sickly Foliage and Iron.

Many observers must have noticed the pale and sickly appearance which plants sometimes assume when in a diseased state. The restoration of these to a healthy condition, by the use of salts of iron, has been accomplished in numerous experiments by EUSEBE GRIS, of Chatillon, in France. That the sickly condition of the plants operated upon, bore a resemblance to that of the *Yellows in the Peach*, as known in this country, may perhaps be somewhat doubtful; but the success attending his experiments, and the beneficial use of iron on some diseased trees in this country, are such as to lead to the belief that it may prove of important benefit. The attention of the public has been particularly called to this subject in the *Horticulturist*, by A. J. Downing, its editor. A brief notice may induce some of our readers to repeat or modify the experiments. The iron was applied in the form of solutions of its salts, the sulphate, chlorate, and nitrate of iron; the sulphate (copperas) being chiefly used, at the rate of 3 or 4 drams to a quart of water, if for watering the root; or at the rate of only quarter of a dram to a quart of water, if for syringing the leaves.

The experiments on plants in pots, where the solution could be easily applied to the entire roots alike, were eminently successful. Some species of *Pelargonium*, *Stachys*, and *Malva*, by two or three waterings of a gill to a pint each, entirely recovered their healthy green color in three weeks, though quite yellow at first; a *Diosma* required two months; and a *Pimelia* regained its color but imperfectly. In the open ground, the application to the roots is more difficult, and the results consequently more uncertain; but it was found, however, that a bush of the *Napaea levis*, very badly diseased, was quickly changed to a healthy state.

When the weak solution was applied directly to the leaves of such plants as are most quickly affected, a single application produced a renewal of the green in two or three days, wherever the solution touched them; and in one case of a very badly discolored geranium, "every line painted on the surface of the leaf by a brush, was rendered beautifully distinct through the intensity of the green color." For producing an immediate effect on diseased trees, syringing the leaves is considered preferable.

Very favorable results were obtained when the process was applied to sickly pear trees with discolored foliage.

It was remarked during these experiments, that when the solution was applied to the roots, and consequently ascended through the stem, branches, petioles, and midribs of the leaves, the parts of the leaves nearest the nerves or midribs were first changed in color, and the veins or minuter ramifications afterwards. On the contrary when the coloring was applied to surfaces of the leaves, the portions colored were distributed in patches without any relation to the nerves or veins.

The editor of the *Horticulturist* states that Dr. Reed of Poughkeepsie, applied iron in the form of blacksmith's scoria and cinders, to the soil about his pear trees, and the result was a remarkably healthy growth and fair fruit; his practice being founded on the fine condition of the pear tree in the iron district in the eastern States. He also says in a number published last year, "On learning, last autumn, with some surprise, the great perfection which the pear attains [at Plymouth,

Mass.,] we applied to Mr. Washburn, one of the most successful growers there, for a sample of his soil. On having it analyzed, we find that this soil differs from other fertile soils chiefly in containing a much larger proportion of oxide of iron."

T. A. Smith of Syracuse, describes in the same work, a successful application of rusted iron turnings to the roots of a diseased peach tree, which soon restored it to health. The earth was removed from the roots; a peck of turnings applied, water poured on, and the soil replaced. This may be an over-dose; but the rust of iron is very slowly dissolved and absorbed by the roots. The disease was perhaps incipient *Yellows*, though this does not appear certain.\*

These experiments may not uniformly prove successful—and they cannot be recommended with the confidence resulting from long practice. But they are easily performed, and may lead to important and valuable results, and are hence well worthy of a full trial. It should be observed in all new experiments of the kind, that safety dictates a commencement with a small quantity, increasing the dose till the desired effect is obtained.

## Experiments and their Results.

EDITORS CULTIVATOR—With a little leisure, and yet without sufficient time to write an elaborate treatise on such profound subjects as "Potato Disease" and kindred themes, with which some of our craft are sometimes occupied, I send you a little of all sorts—pomological, horticultural, and economical. Please shovel this heap into your editorial mills, blow out the chaff, then, if any good seed remains, hand it over to your printer that he may sow it broadcast over the land. If some of this seed be of sorts of which you have sown enough already, you will of course reject it, or save it for next year. And if there should be danger that the sowing of such a diversity of kinds should produce cross-breeds, if sown altogether, you may distribute it to different departments of your editorial field.

## I. Facts and Incidents in Planting Fruit Seeds.

1. APPLES—In the spring of 1846, I planted a load of apple pomice in a good soil and with care. Not a seed ever grew either that or the next year. *Error*: The pomice was just sprouting when it was brought home. The disturbance ruined the seed.

2. PLUMS—The same spring I planted two or three quarts of plum stones that had been buried in earth in the garden all winter. Not a seed ever sprouted. *Error*: They were just sprouting when dug up. *Query*: Do plums always suffer thus when planted under such circumstances?

3. CRANBERRIES—May 24th, 1847, I planted thirty square rods with cranberries. (a) *Seed*—Some of it was cleansed from the pulp in early winter and kept in sand in the cellar. The remainder was prepared on the day of planting by rubbing the berries in the sand in which they were planted. The fruit had been fine. (b.) *Soil*—The ground was a swamp muck combined with sand, drained dry three years ago and well cultivated since, but without any manure. Soil as fine as a garden. (c.) *Mode of planting*: The ground was first marked out for turneps, and that seed sown. The cranberry seed was then planted in alternate rows, at

\* One of the most infallible proofs of *Yellows*, is premature ripening and discolored flesh of the fruit; an indication however probably too late for a remedy.



two feet apart in the row. (d.) *Results*: Not a seed was ever seen to grow. *Query*: Was this ground too dry? I have sprouted these seeds in my house in a cup of black swamp earth kept constantly wet. Is this essential to their germination?

4. MOUNTAIN ASH—I have twice sowed these seeds. In one case the seed has been taken from the fruit in the fall, and kept in the cellar through the winter; in the other, the berry was buried in sand in the garden. *Result*: Not a plant grew. Can some of your correspondents tell me how I failed?

## II. Grafting.

1. PEARS ON MOUNTAIN ASH, in May, 1847. The stocks were procured in the fall of 1845, from a swamp, and were planted in a dry sandy soil, made rich with a compost of muck and manure. In the fall of 1846, nearly two-thirds of them were found fatally injured by the common white grub, which had penetrated the tree just beneath the soil, and had worked upward, in some cases nearly two feet. Of those that escaped, sixteen were grafted with the Virgalieu Pear in the spring of 1847. They all but one started finely, and grew well until the middle of summer, when seven of them died, somewhat suddenly, without appreciable cause.

2. GRAPE GRAFTING IN 1847—(a.) *Mode*: I sawed off the stocks 3 or 4 inches under ground, cut the tops smooth with a knife, split, and then put in the graft, usually with two buds upon it, cut to a wedge. When the cleft was weak I tied it firm with bass. About one half were clayed, though with no perceptible influence on the results. They were sheltered from the sun by a shingle. (b.) *Kinds and Results*: *Black Hamburgh*, two, in good *Isabella* roots—both died. *Golden Chasselas*, six, in roots as above—three lived, making wood from three to five feet; some with six or eight vines. *Royal Muscadine*, two grafts—one of which (a poor one) died. Wood too. *Early Black July*, about twenty-five grafts in Fox grape stocks, with strong roots. About one half lived, a few just living; but the most of them making four or five feet, one seven feet, of wood, with numerous vines. (c.) *Error*: I did not obey the instructions of those writers who say, "wait until the leaf is nearly fully expanded" in the case of summer grafting. Nearly every stock bled profusely. I should undoubtedly have gained by waiting one week. As it was, I think the bleeding of the stock prevented granulation until its top, and the graft too, were dead. *Query*: Would it not be better in this northern clime to graft early in the spring; especially when it is considered that the wood was, in this experiment, so immature that the first severe frost (Oct. 16th) greatly injured the young wood, killing it down almost to its origin. (d.) *Position*: The three first sorts were under the protection of a high board fence. The last were in the open field.

3. GRAFTING GRAPE CUTTINGS IN 1847. (a.) *Object*: The object is the same as in grafting, that is, to give vigor to tender grapes by putting them on strong native sorts. (b.) *Mode*: Take two cuttings, as the *Catawba* for the hardy sort, and the *Sweet Water* for the tender; have them of nearly similar size. Pare off one side of each, a little above the centre, on the side opposite the top bud of each, cutting the vines almost to the pith, making the wound very smooth, and about two or three inches long. Bring the flattened surfaces accurately together, securing them well with bass or yarn, either of which will rot soon enough. Then plant the cutting in the usual mode. (c.) *After treatment*: Let both buds grow for two seasons, at the end of which it may be presumed the union of the two cuttings will be perfect if ever. Then cut away the wood of the strong vine, giving the tender one the enjoyment of the double root. I have about thirty such grafted

cuttings in progress. I have made no examination of them to ascertain whether there is an actual union of the two cuttings. (d.) *Supposed gain of this mode*: There is less difficulty in timing the operation than in grafting, and probably less danger of failure. But it will take another summer to settle the question of feasibility and utility.

## III. Purification of Melon Seeds.

Few fruits are more acceptable in their season than melons. But if there be any other seed in the purchase of which the gardener runs so much risk, I know not what it is. And yet it requires but little labor, in the cultivator who has room, to keep melon seed pure, or to cleanse it when it becomes mixed. Those who have not abundant room, may raise a great variety of good melons the first year if they have good seed to start with, but they must not expect to do it the second year without a change of seed. It may be here premised, that melons kept pure exhibit very little change in shape and appearance, being, in this respect, among the most constant of fruits; nor yet do they change much in quality or flavor in successive years, if the seasons are favorable. The names of melons occurring in this article are used as I find them here at Utica. I make no pretension to learned accuracy.

*Experiments with mixed Seed*—1st. In the spring of 1844, I planted the Green Fleshed Citron Melon. As it ripened in August it exhibited an intermixture of the Honey Melon. By carefully selecting my seed from such hills as seemed to have no Honey Melons in them, I have succeeded in perfectly purifying this seed. 2d. In the spring of 1845, I obtained some seed of the Skillman Melon from Albany. It produced three sorts of melons—a large round, very early, and tolerably good Yellow flesh—a long oval Green flesh of fair quality—and a small flattened Green flesh of excellent quality, very nearly identical with the New Jersey Rock Citron, though a little earlier. 3d. I have tried another experiment, which is too long for detail here, in which I succeeded in separating from a single melon, presented me in the fall of 1845, three distinct varieties of Yellow flesh, one of White flesh, two of Green flesh, and one of pumpkin or squash—in all seven, two of which I shall continue to cultivate. The others are not sufficiently valuable to be perpetuated, especially as I have others quite as good.

I think it evident from the foregoing facts, that the intermixture of melons, and probably of all classes of plants called popularly *vines*, is not very intimate, since they are so easily separable. Persons who forward their vines under glass, and keep them covered until the fruit begins to set, may always secure good seed by artificially impregnating the early sets. I have done so, nearly invariably for some years. The labor is small compared with the advantages. The mode of doing this, though described in the books, is seldom practiced. It will bear repetition. In the morning, as soon as the dew is off, collect a few staminate blossoms, in such as have long stems, and never exhibit an embryo fruit below them. Then search your vines for the pistillate flowers, i. e. those with short stems, and having a small hairy fruit below them. Having found a pistillate flower just open, take a staminate one between the thumb and finger of one hand, while with the other you carefully pull off the leaves of the flower, being careful not to disturb the organs in the centre of it. Now take hold of the pistillate flower with one hand while with the thumb and finger of the other, you gently twirl the prepared staminate flower which you have at hand just within it. The object of this operation is to sprinkle the dust of the staminate flower, upon the central portions of the pistillate ones. This being done successfully, the pistillate flower will soon begin to enlarge, while, if unsuccessful, it will turn yellow and

die. One thing should not be forgotten—staminate flowers are not only much more numerous than pistillate, on all sorts of vines, but begin to appear one or two weeks earlier, and are most numerous the whole season.

#### IV. Choice of Melons.

He who has once tasted a good Green Flesh Melon, will rarely long for a Yellow one. "But of the *Green* which are the best?" I answer that between the *Green* which I have cultivated, there is but little room to choose in regard to flavor. Yet to the cultivator it is important to make a wise selection. The *Persian* is a little the earliest, and requires the most care, as it should be watered almost daily in a dry season. Its fruit also fails rapidly in quality on the approach of autumn. The *Skillman* is somewhat liable to crack and rot, especially in wet weather. The *Honey Melon* is too small for a market melon. The *New Jersey Rock Citron* is the latest melon we have, and therefore it is not so eligible as some others. The *Citron* remains to be noticed. It is usually the largest of all fine Green flesh, is more uniformly good in all seasons, and holds its qualities at the approach of autumn far beyond any melon of my acquaintance; often presenting a bright green luscious flesh when all others have become pale and vapid. I have said nothing here of the *Minorea*. When ripened in very hot weather it is often of fair flavor, but it so uniformly cracks before it is ripe, and so loses all flavor at the first approach of cold weather, that I consider it worthless; though to the eye it is the most magnificent of all Green melons, sometimes reaching with me the weight of nine and a half pounds.

I have said nothing of the *cultivation* of the melon. That, in so cold a climate as that of Utica, would alone become the subject of a long article.

I subjoin a description of the principal melons referred to above.

1. The *Honey*, very small, white, round, smooth; very thick meated, of most delicious flavor.

2. The *Skillman*, as purified in my hands, is small, flattish, has moderate sutures thickly netted on a green ground. (3.) The *Rock Citron* is much like the *Skillman*, only with deeper sutures, and more variable in size.

4. The *Persian* is oval, with a slight neck, thinly netted, on a green ground, which approaches a yellow when ripe. Its flesh is a little thinner than that of the preceding kinds, and not so deep a green. It has moderate sutures, and is larger than any of the preceding kinds.

5. The *Citron*. This melon is bluntly oval, larger than any other Green Flesh, except the *Minorea*, usually moderately netted, on a deep green ground, which changes but slightly as it approaches ripeness. It has a very obscure suture.

I think the community are greatly in danger of being gulled in the recommendation of melons. Should a pomologist make the tour of Persia, Afghanistan and Egypt, he could not find melons which, when brought home and cultivated here, would be superior in flavor to almost any one of the fine good varieties noticed above. He who wisely cultivates them in a hot sand, in a warm and long season, will have fruit as rich as a *Peach*—as rich as can grow in this country. Ordinarily they should be forwarded in a hot bed, so that they may ripen under a July and August sun.

#### V. Melon Squash.

This is a hybrid between the Green Fleshed Melon and the Seven Years Pumpkin. The latter, for some reason, had not with me answered its character abroad either in the richness of its flavor, or in its duration. In the July of 1844, I impregnated about fifty of its

pistillate flowers with the staminate of some of my varieties of the Green Flesh, although I did not notice which. The flowers were covered carefully with paper, immediately after impregnation, to exclude bees and flies. About six or eight were successful. The fruit was not altered in size and appearance that year, but the seed was, as it became thicker and more stubbed than the original seed of the Seven Year Pumpkin, while its color became exactly that of the melon seed. In 1845 I planted seed from four specimens that seemed most changed by the crossing. In consequence of very dry weather and neglect, all these failed but one. This one produced largely. From its crop I selected a few specimens that combined the Nankin Yellow and pale Blue of the Pumpkin with the knotty and netted appearance of the Melon. These and others like them were planted in large quantity for market in 1846 and 1847.

The *Result* is a rich, thick-meated Squash, (or Pumpkin if you please,) much richer than its Pumpkin parent, with a yellow, almost red, flesh. This Squash is not so long a keeper as the Pumpkin from which it was derived, but is to me a more valuable variety.

I remark on Squashes, as I did upon Melons, that the public are perpetually amused with intelligence of new and extraordinary varieties. Mammoth Squashes are valuable only to look at. For the table they are comparatively less valuable than "Still fed Beef." Any one who has a rich spot of moist ground, can grow a mammoth Pumpkin; but when grown it is far less valuable and deserving of a "State Fair Premium" than a great crop of corn. The true *Valparaiso Cheese* and *Winter Crook Neck*, and my Melon Squashes are, I apprehend, as rich and valuable varieties as our climate can ever produce. They have the advantage of moderate size, and this is not a small one either to the cultivator or the consumer. Let us hold on to them, and discard new varieties unless they are recommended by an old wholesale cultivator in the most unqualified manner. In the hands of a tolerably careful gardener, Squashes need never run out. A good corn season will almost always give good winter Squashes, if they are planted early so as to mature, like the Melon, in the very hottest weather, or if not absolutely to mature, at least to get the most of their growth during this season. Squashes are sometimes rejected because, being planted one season, they fail. I had a valuable Squash that was not eatable in 1840 and 1841, which, both before and since, has been very fine.

#### Improvement of Varieties.

A writer in the *Gardener's Chronicle* gives some interesting results of experiments in improving the varieties of vegetables. He began with long pod beans. He took for seed, none with fewer than five seeds in a pod. The following year there were many six seeded pods, and some with seven. Still selecting the best, he procured many six and seven seeded pods, and some with eight. In this way new and distinct varieties were formed; for while some remained with five seeded pods, it was found that they rarely had a six seeded pod upon them; while those with six seeded pods were nearly all so, and some seven seeded. New varieties are only produced from seed; hence the importance of a constant care in selection in all crops which are annually reproduced in this way. A skilful market gardener in Western New-York, by constantly selecting the earliest seeds of the Washington pea, in a few years had them more than a week earlier than his neighbors, who had cultivated the same variety. Plants not reproduced by seeds, as the potato by eyes or tubers, and fruit trees by grafts and buds, remain perfectly unchanged for ages; for this is only a continuation of the



same original plant, which cannot change its own being.

#### Insect injurious to the Grape-Vine.

CHAS. W. MULFORD, of Rensselaerville, N. Y., has sent us some insects which he states are very destructive to the grape-vine. He says:—"They commence their ravages in the spring, as soon as the grape buds begin to swell, eating a portion of each bud, and so maiming as to destroy its growth. They continue to destroy the buds as fast as they appear, till about the end of June, when they begin to disappear. My father has a vine which has borne upwards of two bushels of excellent Isabella grapes annually; but for the past two seasons it has not borne a single grape, and indeed has not shown its leaves till July, from the fact that its buds are destroyed up to that time by the insect. After the leaves show themselves, they are much eaten throughout the season by a minute worm or slug, but whether this has any connection with the former insect, I have not examined sufficiently to determine."

The insect sent us is a species of beetle, of a greenish black color, about a fourth of an inch long and an eighth of an inch wide. Its name we have not ascertained. We have never known such an insect to prey on the vine, and cannot say whether the slug spoken of is the larva of this beetle or not. As to a remedy against their ravages,—our correspondent states that the beetles were found in great numbers among the dried leaves under the vines, and these might, of course, be destroyed by raking them up with the leaves and burning them. Syringing the vine with tobacco water, fumigation with tobacco or sulphur, scattering over the buds and leaves air-slacked lime or plaster, might destroy the slugs, and perhaps keep the beetles away.

#### Destruction of Fruit Buds by Frost.

The destruction of the buds of peaches and other tender fruits frequently occurs in this latitude, under severe cold. It has been remarked in peach growing neighborhoods, that whenever the mercury falls below zero for several days, the fruit buds are killed. It is probable, however, that the precise *degree* of cold which is required to produce this effect is not generally known. It is generally supposed that the destruction depends somewhat on the *continuance* as well as on the degree of cold. For instance, it is thought that five nights with the mercury at zero may cause as much injury as would one night with the mercury at ten degrees below zero.

C. H. Tomlinson, Esq., of Schenectady, has paid much attention to this subject. The substance of his observations, as communicated to the writer in a late conversation, may be given as follows:—That when the mercury for only one night falls to zero, a few peach-buds will be killed; that when it falls to four or five degrees below zero for the same time, a larger proportion of the buds are killed; and when it falls as low as twelve to fifteen below, a "clean sweep" is made of the buds of the peach, nectarine, apricot, &c.

The question has been raised whether, if the ground was prevented from freezing by snow, the same degree of cold would produce the same injury to the buds. Mr. Tomlinson has made some observations on this point. Several years ago there fell a deep snow before the ground was frozen at all, and where the snow remained undisturbed the ground did not freeze under it. Of course the roots of trees were in unfrozen ground. While this state of things existed, very cold weather occurred—the mercury falling to ten degrees below zero. The usual consequences followed—the peach-buds were generally killed. In some instances the

lower branches of the trees were buried in the snow, and on those branches the buds were saved, blossomed, and produced fruit the succeeding season.

The morning of the 11th of January last was remarkably cold—the mercury, in this neighborhood, ranging from 18 to 23 degrees below zero. Mr. Tomlinson states, the fruit-buds of the trees above-mentioned, around Schenectady, were all killed at that time. A good illustration of the appearance of peach-buds when killed by cold, will be found in the *Cultivator* for 1846, page 183.

#### Singular Circumstance.

At Wyalusing, Bradford County, Pennsylvania, many years ago, a thrifty young apple tree was inoculated with buds of the Golden Pippin—three branches, changing the whole head. When the tree began to bear, it was found that one of the branches ripened its fruit in July, and the others in October—all Golden Pippins. Many persons applied for grafts of the early branch, but the owner discouraged them; supposing that the cause of this singular variation existed in some defect of the stock in that branch, and that grafts taken from it would possess no property different from the original Golden Pippin. However a son, having less faith in the stability of natural law, tried the experiment privately, and on the third year brought in seven early Golden Pippins from the new graft. We now suppose that in this new way a new variety of early fruit is added to our stock as much superior to other early apples as the fall Golden Pippin surpasses them. Scions of this singular variety have been sent to Tharps' Nursery, Binghampton, New-York, where inquirers may obtain it. C. F. WELLES, Wyalusing, Penn.

#### Culture of the Blackberry.

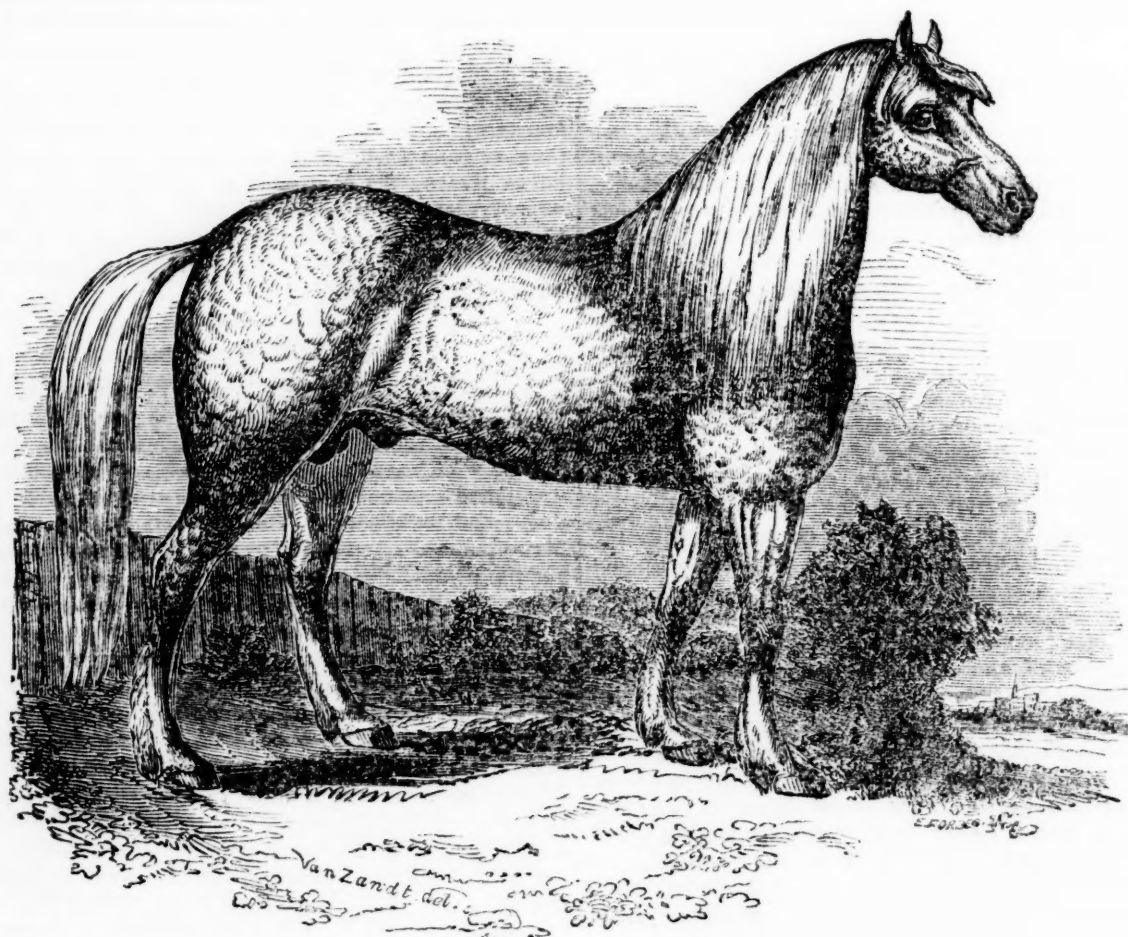
Having seen an inquiry respecting the culture of the blackberry, I will send you the method which is practiced by a friend of mine, who has a beautiful hedge which produces a great abundance of this excellent fruit.

The plants are set out in rows four or five feet apart, and are kept free from weeds and grass through the summer; in the fall these spaces are filled with leaves from the forest. The next spring a quantity of ashes is strewn between the rows—these with the leaves are all the means used to secure a beautiful harvest every season. W. H. West Bethel, Vt., March 28, 1848.

THE WHITE DOYENNE, or *Virgalieu Pear* in Ohio. C. Springer, well known as a cultivator of fruit in Muskingum County, Ohio, says, "The White Doyenne pear is the only grafted variety, out of several kinds, planted eighteen years ago, that has sustained itself against the blight. It is a regular and plentiful bearer, and among the very best of pears."

PROFITS OF FLORICULTURE.—M. P. Wilder, President of the Mass. Hort. Society, raised two new varieties of the Camellia, of such unsurpassed beauty, that he sold the stock of these two seedlings to J. L. L. F. Warren, for one thousand dollars. They were taken to Europe, and sold for about fifty dollars a pair, to the amount of nearly three thousand dollars. This will not appear so extravagant, when it is remembered that by a few years' increase, these purchasers may dispose of the increased stock at ordinary prices, and make a handsome profit on their purchases.

PEARS.—At the autumn exhibition of the Massachusetts Horticultural Society, R. Manning exhibited two hundred and fifty varieties of pears, and M. P. Wilder, the President of the Society, exhibited a hundred and fifty varieties.



### THE NORMAN HORSE.

THE above engraving represents the Norman horse, called *Louis Philippe*, bred by EDWARD HARRIS Esq., of Mooerstown, N. J., and now owned by Mr. R. B. HOWLAND, of Union Springs, Cayuga County, N. Y. He was foaled in 1843. His sire and dam were selected in France by Mr. HARRIS in 1839.

The origin of the most esteemed variety of the Norman horse, is said by French writers to have been a cross, made several hundred years ago, between the celebrated Andalusian stock of Spain, and the old Norman draught horse. The Andalusian was derived from a cross of the Arabian or Barb, introduced into Spain by the Moors during their occupancy of that country from the eighth to the sixteenth centuries. No breed in Europe, is more fixed in its characters, or transmits its peculiar traits with more certainty, than the Norman.

This is the variety of horse which is preferred in France for drawing the ponderous stage-coaches called "diligences," and travellers, on passing through the districts where they are used, frequently express their astonishment at the performances of these animals. We have been informed that each of these vehicles is calculated for carrying eighteen passengers at once, and that when thus loaded they are equal to five tons' weight. Five horses (all stallions) are, with rude harness, attached to the clumsy and cumbrous carriage; and their regular rate of movement with this enormous load, is seven miles an hour. The pace is generally kept up over the various acclivities, but occasionally, when a very long hill is to be ascended, an additional horse or two is added to the team.

On some routes the loads are lighter, and the pace is there quickened to eight or nine, and in some instances to ten miles an hour.

Mr. HARRIS was induced to import this valuable

breed of horses from having become acquainted with their qualities during a residence in France; and Mr. HOWLAND was also led to make the purchase of one of this stock from having been convinced of their great superiority, for many purposes, by seeing them in their native country.

Perhaps a better description of this breed cannot be found than has been given by a writer in the twelfth volume of the Scottish Quarterly Journal of Agriculture. He says:—"The horses of Normandy are a capital race for hard work and scanty fare. I have never seen such horses at the collar, under the diligence, the post-carriage, the cumbrous and very heavy voiture or cabriolet for one or two horses, or the farm cart. They are enduring and energetic beyond description; with their necks cut to the bone they flinch not; they put forth all their efforts at the voice of the brutal driver, or at the dreaded sound of the never-ceasing whip; they keep their condition when other horses would die of neglect and hard treatment.

"A better cross for some of our horses cannot be imagined than those of Normandy, provided they have not the ordinary failing of too much length from the hock downwards,\* and a heavy head. It is very doubtful whether the infusion of much English blood among the Norman breed will be serviceable. I have seen many bad productions in consequence of this crossing, chiefly loss of weight and strength in those points where the draught horse should excel."

\* Mr. Howland's horse is by no means faulty "from the hock downwards," and we have been informed that his sire, *Diligence*, and the mares imported by Mr. Harris, have not this defect. Mr. Youatt's observation in regard to the cross of the Norman horse with English breeds, is worthy of notice. "The English roadster and light draught horse has not suffered by a mixture with the Norman horse."



## MANUFACTURE OF CHEESE.

AT the January meeting of the New-York State Agricultural Society, 1848, Mr. ALONZO L. FISH, of Litchfield, Herkimer County, received a premium of fifty dollars, for an account of experiments made by him in the manufacture and management of cheese. Mr. F.'s valuable essay (as it may be called) is embodied in the elaborate report of the committee appointed by the Society to examine the claims of competitors under this head, and will be found in the volume of *Transactions* for 1847, when published. We think the following extracts from Mr. Fish's remarks, will be read with advantage by those of our readers who either are, or expect to be, engaged in cheese-dairying.\*

Having been personally engaged in 1845, in some 60 dairies, which were located in thirteen towns and four counties, and more or less in the same manner the past two years, I have observed a marked difference in the capacity of soils for producing herbage, under different modes of culture, and the various conditions and treatment of cows, affecting their capacity for milk, both as regards *quality* and *quantity*. The inconvenient and improper fixtures, in many instances, for making and curing cheese, which are to be found, all unite in convincing me, that any set rules for making cheese would not be practicable, even with the most proficient cheese-maker; because,

In the first place, milk is a fluid very liable to be varied in quality by impure water, by damp and unventilated stables, change of diet, excess of feeding, excitement of temper, irregular milking, salting, &c., which destroy its susceptibility to produce like results.

2d. Cheese, when pressed and exposed in a *curing process*, is no less easily affected, and is equally liable to be varied in texture and flavor, by size of cheese, exposure to excess of heat, bad air, &c., the effect of which I shall hereafter notice. There are, however, leading principles which form the basis of operations, and should be closely adhered to, in *all cases*, in the process of manufacturing cheese. *Salt, Rennet, heat and pressure*, are the principal agents used in converting milk into cheese, the flavor and texture of which is determined by their proportionate use. Their proportion is varied by different dairymen, according to their notions of propriety, as best adapted to their fixtures, experience, &c. Hence arise the great inequalities in dairies, in the same neighborhood, and even in the same *dairy-rooms* may be found as many different qualities of cheese as there are of fruit in an apple orchard. Some of these are matured at an early period, while others mature later, and are unsuited to the same market.

Much of the cheese being contracted for before it is made, (in the early part of the season) both buyer and maker are liable to be disappointed, in the cheese being suited to the market for which it is designed, destroying the confidence of purchasers, and injuring the interest of the dairymen. It is therefore necessary, that makers should have sufficient knowledge of the science to determine the result of their practice, which cannot be learned from verbal instruction. It is by

*practical experience and close observation only*, that the maker can learn to adapt his practice to the frequent and extreme changes to which our climate is subject, varying the quality of the milk, and materially affecting cheese in the process of curing.

The evening's and morning's milk is commonly used to make one day's cheese. The evening's milk is strained into a tub or pans and cooled to prevent souring. This is done by running water through a vessel set in the milk, or setting pails filled with cold water into the tub, and stirring till cool; but little cream will rise over night.

The cream is taken from the evening's milk, and kept till the evening's and morning's milk are put together, and warmed to receive the rennet. This is often done by heating a part of evening's milk to a temperature that will warm the whole mass. Both are objectionable, *because the natural affinity which is necessary to preserve between the constituent parts a perfect coherence*, is destroyed, by a portion of the milk being overheated. It is better to warm the whole mass in a manner that will produce an *equilibrium of heat*, which is best done by placing the vessel containing the milk within a large vessel, with two inches under the bottom, and one inch of space at the sides, into which space water may be put to cool the milk, and into which steam may be let to warm the milk and scald the curd. The more water surrounding the milk, the more uniform will be the heat. The cream, if added, (which is generally done,) is best incorporated with the milk, by putting it with twice its quantity of new warm milk from the cow, and add warm water to raise its temperature to ninety-eight degrees. Stir it till perfectly limpid, add cream to milk, and then put in rennet, that the same stirring may mix both at once with the same mass. If milk is curdled below eighty-four degrees, the cream is more liable to work off with the whey. *An extreme of heat will have a like effect.*

Curdling heat is varied with temperature of the air, or the liability of the milk to cool after adding rennet. A fine cloth spread over the tub while the milk is curdling will prevent the surface from being cooled by circulation of air. No *jarring of the milk*, by walking upon a springy floor or otherwise, should be allowed while milk is curdling, as it prevents a *perfect coherence*.

*Rennet*.—Various opinions exist as to the best mode of saving rennet, and that is generally adopted which is supposed will curdle the most milk. I have no objection to any mode that will preserve its strength and flavor, so that it may be *smelt and tasted* with good relish, *when put into the milk*. Any composition not thus kept, I deem unfit for use, as the coagulator is an essential agent in cheesing the curd, and sure to impart its own flavor. The rennet never should be taken from the calf till the excrement shows the animal to be in perfect health. The stomach should be emptied of its contents, salted and dried, without scraping or rinsing, and kept dry for one year, when it will be fit for use. It should not be allowed to gather dampness, or its strength will evaporate. To prepare it for use: into ten gallons of water, (blood warm,) put ten rennets, churn or rub them often for 24 hours, then rub and press them to get the strength, stretch, salt and dry them as before. They will gain strength for a second use, and may be used when the weather will admit of soaking them to get the full strength. Make

\* We have in previous volumes described the modes of making various kinds of cheese. A former essay of Mr. Fish's is given in vol. X, pp. 114, 129, 147. We would also refer to vol. I, new series, p. 133, and for the mode of making the English Gloucester cheese, to the same volume, p. 165. An article on "Cheese Dairies of Connecticut" is given in volume II, p. 253; and a description of the mode of making the English Cheshire cheese in volume III, p. 268.

the liquor as salt as can be made, strain and settle it, separate it from sediment, (if any,) and it is fit for use. Six lemons, two ounces of cloves, two ounces of cinnamon, and two ounces of common sage are sometimes added to the liquor to preserve its flavor and quicken its action. If kept cool in a stone jar, it will keep sweet any length of time desired, and a uniform strength can be secured while it lasts. Stir it before dipping off to set milk, take of it enough to curdle milk firm in 40 minutes. Squeeze or rub through a rag, anatto enough to make the curd a cream color, and stir it in with the rennet. When milk is curdled so as to appear like a solid, it is divided into small particles, to aid the separation of the whey from the curd. This is often *too speedily done*, to facilitate the work, but at a *sacrifice of quality and quantity*.

The three *indispensable agents*, heat, rennet and pressure, rightly applied, must keep pace with each other in effect. The two former operating to subdivide, the latter to aid cohesion, by bringing the particles of a sameness closer in contact. This should be *skilfully* and *studiously* applied in a mild way, according to the capacity of the curd to receive it. The less friction in working the curd the less waste. If heat is raised too fast, or commenced while the curd is too young, the effect of the rennet will be checked, and decomposition will not be complete, and will result in a leaky cheese.

This often happens when steamers are used in small dairies. Heat may be raised in scalding to keep pace with rennet; if rennet is quick, heat may be raised quick; if slow, heat must be raised slow and held longer. Scalding heat may be carried from ninety-six to one hundred and four degrees, according to the size of the cheese, and temperature to which the cheese is exposed. During the process of scalding, the whey and curd should be kept in motion, to prevent the curd from settling and sticking together, as separating it is attended with great labor and waste from friction.

When the curd is cooked, so that it feels elastic and will squeak when chewed with the front teeth, it is separated from the whey to receive salt. This is done by dipping it into a strainer over a basket or sink, or drained off and salted in the tub. Either may be done without adhering in lumps, by stirring it in a small portion of whey, till cooled to 94 degrees. This is the most critical part of the process, where cheese-makers are most likely to err, as the portion of salt retained in cheese after pressing, will be in proportion to the capacity of curd to receive it when added. At a particular period and temper of curd, when draining off whey, it will absorb salt freely, and after being thoroughly mixed and packed up for a few minutes while warm, it will be evenly shrunk and cleansed by salt and whey, and will press out freely; but if the curd is *not well cooked*, or if it is cooled too fast in draining off whey, it will acquire a degree of stubbornness, prevent the absorption of salt to shrink and cleanse, and *no amount of pressure* will be sufficient to drive out the fluid.

If curd is not worked even, the larger lumps will not be cooked enough, or the lesser too much, (like large loaves of bread and small biscuit baked together in one oven,) hence, the cheese is left impregnated with the elements of fermentation, which increase on being exposed to heat, till the cheese is sufficiently swollen, or huffed, for each constituent to occupy a separate space in the same shell or rind. The fluids are first attracted together by affinity, forming small cavities in which they remain *unaffected by salt*, become fetid, and generate an unpleasant odor, which is a fair proof of the quality of rennet used. Curd should be salted warm, as it is then more absorbent, and it should be thoroughly cooled before putting it to press, to suppress the combined action of heat and ren-

net. The quantity of salt required, varies with the condition of the curd, size of cheese, amount of heat to which the cheese is exposed in curing, and market for which it is designed.

A well worked cheese, from fifty to one hundred pounds, requires one pound of refined salt to forty pounds of curd, to remain in the cheese after it is pressed and exposed to a temperature of from seventy to eighty degrees. This may be varied from two to four pounds to the hundred, according to the texture of cheese required—small cheese requiring less, and large cheese more.

A degree of moisture is necessary in cheese for a malleable texture, but this should not be from *animal fluids retained in the curd*. A high salted cheese immediately exposed to high temperature, becomes sour, hard, dry and crumbling; the same exposed to a cool, damp atmosphere retains sufficient moisture to be soft, yet solid. A cheese light salted in a high temperature will cure quick, become porous, huffy and stale. Curd from hay milk, requires much less salt, than that from grass or grain feed, as it is poorer and will retain salt like lean meats. The richer the milk, the more salt is required to control the animal properties, and the *less absorbent the curd*, the pores being filled with the finer buttery particles.

More salt is required in hot weather also, to overcome the *combined action of rennet and heat*, neither of which will be effective alone. When curd is ready to press, it is important to *dispossess those decomposing agents*. The gastric juice (or coagulator) is a fluid, and works off with the animal fluids in whey; and the only way to get rid of it, is to work the curd down *fine and solid and work the whey all out*. Then cool the curd thoroughly before pressing, and the cheese will be solid and keep its place. But if the whey is not all out, the decomposer is yet on hand, continues its action (aided by heat) till an *equilibrium of chemical action is destroyed in the cheese*, and the fluid properties leak out in fetid whey and oil, leaving it a rank and worthless article. In short, the proper method of using salt must be arrived at by a close observation as to its *chemical combination with the constituent properties* at different ages of the cheese with different sizes, heat, dampness, &c. This, although an essential point, has not been sufficiently determined by chemical analysis to be reliable. (To be Continued.)

#### The Carol of May.

[The following song, the production of an English writer, was left with us by a friend for republication, sometime since. It seems appropriate to the present season:]

By the side of a mountain o'ershadowed with trees,  
With the clusters of vines intermingled and wove,  
I behold my farm-cottage, dear mansion of ease—  
The seat of retirement, of friendship and love.  
In the morn, when I lift up the latch of my door,  
My heart beats with rapture to hear the birds sing;  
And at night, when the dance in the village is o'er,  
On my pillow I strew the fresh roses of spring.

Then I hie to the forest, from noon's scorching beams,  
Where the torrent's deep murmur re-echoing sounds;  
The herds quit their pastures to quaff the clear streams,  
And the flocks of the vale lie extended around.  
I muse, and my thoughts are contented and free,  
I regret not the splendor of riches or pride;  
The seat of retirement is dearer to me  
Than the proudest appendage to greatness allied.

I sing, and my song is the carol of May;  
While my cheeks glow with health like the wild rose in bloom—  
I dance, yet forget not, tho' blithesome and gay,  
That I measure the footsteps which lead to the tomb.  
Contented to live, yet not fearful to die,  
With a conscience unspotted I pass through life's scene;  
On the wings of delight every moment shall fly,  
And the end of my days be resigned and serene.



## THE FARMER'S NOTE BOOK.

## Culture of Carrots and Corn for Fodder, &amp;c.

About the time I commenced doing a little business for myself in the way of farming, in the early part of 1846, a friend of mine solicited me to take the *Cultivator*. Not having a ready command of that harsh little word *no*, I consented as a matter of courtesy to take it for one year, as the expense was not very great. At the end of the year I was not quite ready to spare the *Cultivator*, and concluded to take it one year more; and at the close of 1847, I concluded to subscribe for the next volume, and prevailed on two or three of my neighbors to "do likewise." Is it asked what I have found in its pages to repay the trouble of perusing and the cost of paying for it? I reply, that I think I have obtained *general* information relative to the business of farming sufficient to compensate me *amply*.

At page 217, vol. III, I found a description of a cheap and useful root cellar, from which I have received hints worth more than the price of two years subscription. I of course varied the plan to suit circumstances. Mine was under a hay barn, 16 ft. by 26. Under one half the building the sheep have a shelter, and under the other half, 16 by 13, the cellar is located. Of course it is not quite as large as that of our Vernon friend, but otherwise it is similar to his. The passage is through the sheep shelter. It may be well to remark that the barn stands on descending ground, and the sheep occupy the lower end, and the cellar is at the upper end.

Carrots are the roots I keep in the cellar, and I will just mention my mode of cutting them:—I made a box by taking a piece of plank, say one foot wide, and two and a half feet long, nailing pieces of boards one foot wide to the sides and ends. A strip of leather nailed at each end, to the sides of the box, forms a handle. This box is filled with carrots, and by the aid of a common spade, ground sharp, they are soon "chopped up," when they are placed in the sheep-troughs and soon devoured. For feeding hay I use racks, made by nailing boards to upright pieces of scantling, similar to those described by L. A. Morrell.

When I commenced reading the *Cultivator*, I found the raising of carrots and corn fodder recommended. Not being much acquainted with the business, I tried a little piece of each in the garden by way of experiment. A neighbor when he saw me weeding the carrots, (little things scarce large enough to be seen,) told me it looked like "little business," and that for his part he had rather hoe potatoes than trouble himself with such small affairs. However, when autumn came and he compared his diseased potatoes with my sound and rich looking carrots, he seemed to change his opinions. He told me last spring, that he had a piece of ground, about fifty square rods, in a tolerable state of fertility, and better adapted than mine for growing carrots on account of being free from stones; and that if I would furnish seed for the whole, I might have the use of half of it. I accepted the offer, and the seed was procured and planted. A simple barrow or wheel was used for marking the ground. The seed was then scattered along in the furrows by hand, at the rate of perhaps two and a half pounds per acre. Distance of drills apart twelve to fifteen inches. The seed was covered by reversing a hoe, and shoving it over the drills. The ground was around the barn, and it did not fail of producing plenty of weeds; but by beginning in time, and persevering, they were kept down till the carrots got above them and choked them down. In our mode

of planting, I think two active men might plant half an acre in a day. At harvest a scythe was first passed over them, cutting the tops as close to the ground as could conveniently be done. With a hoe ground sharp, the tops were then cut off, one row at a time, and the tops were raked off out of the way. The carrots were then thrown out, row by row, with a spade. Whether our mode was the *best*, or even a good one, I am not prepared to say, not being practically acquainted with any other. The yield, though not great, was satisfactory. The quantity obtained was about 270 bushels, measured as potatoes; I presume they would not hold out by weight. The amount of time spent in plowing and harrowing the ground, and in sowing, weeding, and harvesting, may be set down at twenty-five days. Allowing seventy-five cents per day for labor, and calling the cost of seed and use of land \$3.25, the amount is \$22, which brings the carrots at a little more than eight cents per bushel, and I deem them worth at least as much as potatoes for horses, cattle, or sheep.

A word as to corn fodder. My garden experiment did very well, and I concluded to "try again." I planted in drills this year, about three quarters of an acre. The growth was tolerable. I endeavored to adhere to the directions given in the *Cultivator* for curing it, but the weather in autumn was so extremely wet, that I could not get it as dry as I wished. I got it in as good condition as I knew how to, and put it in the barn, but it moulded so much as to lose most of its worth. I would like to hear whether others have met with similar difficulty, or whether my failure was owing to bad management.

In asking my brother farmers to subscribe for the *Cultivator*, I discover something of an idea prevailing that it concerns chiefly the patricians, and that plebeians can derive little benefit from it. But as to the idea that the contents of the *Cultivator* are useful only to large farmers, I deem it widely erroneous. In its pages every man engaged in agriculture, whether he cultivates ten or ten thousand acres, may, in my view, find information worth much more than one dollar per annum. SAM'L WILBUR. North Easton, N.Y., 1848.

## Large Crop of Indian Corn.

I send you a statement of my success in cultivating corn the past season. As I am indebted to the *Cultivator* for success, I thought I might be the means of benefitting others through the same channel.

STATEMENT OF CULTURE.—The field on which I grew 172 bushels of corn to the acre, and two 2-horse loads of pumpkins, was on a clover and timothy sod of three years standing, and on white-oak upland—part of a farm that was considered run down. In the fall and winter of 1846, I fattened on it about 30 head of hogs, by scattering the corn on the worst parts of the same. About the month of March last, I gave it a moderate dressing of barn yard manure. The field was plowed six or eight inches deep, so that in parts hard yellow clay was turned up full 2 inches deep. The corn was planted in rows four feet apart, averaging about one foot distant in the row. When first the corn came up, it had an unfavorable appearance, in consequence of the large spaces of hard clay; it looked very yellow in patches, but by degrees, these patches disappeared, and as soon as the roots had penetrated below the clay, and reached the sod, it showed quite a healthy color, and made a rapid growth. I was careful during the whole of the cultivation, to disturb as little as possible, the

soil, in consequence of some remarks I had read in the "Albany Cultivator," from the pen of the late lamented Judge Buel, to which publication I am indebted in a great measure for my success. A. A. MULLETT.

#### EXPENSE OF CULTIVATING TEN ACRES.

Manure and hauling,.....	\$20 00
April 11, 7 days plowing at \$1.50 per day,.....	10 50
" 2 days harrowing at \$1.50 per day,.....	3 00
" 30th to May 4, Striking out,.....	1 25
Man 5 days planting at 50c.,.....	2 50
Boys dropping,.....	1 25
Three bushels corn at 40c.,.....	1 20
May 15, Replanting, &c.,.....	1 00
Plowing some 4 times, 3 days each \$1.,.....	12 00
Boys harvesting same,.....	9 00

Cost of cultivating ten acres,.....\$61.70  
or \$6.17 per acre, exclusive of rent.

P. S. I cut the whole of the corn, and the fodder has been sufficient to save from 8 to 10 acres of hay, my usual consumption.

#### Muck Compost.

Will you have the kindness to give us your views as to the comparative value of compost, composed of equal parts of rich swamp muck and yard manure, with decomposed yard manure, when applied as a top-dressing to light upland soil; and also the value of the same compost compared with green manure for the same purpose?

What do you think would be the value of a compost made with equal parts of rich mould, the washings of higher lands, and yard manure, compared with decomposed and green manure as in the foregoing, when applied as a top-dressing to a black, lowland soil?

What would be the comparative value of a compost composed of equal parts of good sandy loam and yard manure, when applied as a top-dressing to a clay soil?

Should not the earthy part of a compost be of a character opposite to the soil on which it is to be applied?

Do you consider that compost, when applied to the land, is more valuable than would be the parts that compose it when applied separately; and if so, what are the changes that render it more valuable?

What would be your opinion as to the comparative value of the different kinds of compost, when applied to tillage lands of the above description?

Woodstock, Vt., 1848.

A SUBSCRIBER.

We cannot give a precise answer to the above questions. "Swamp muck" varies greatly in quality, and that which some people would call "rich," might not be of the very best quality. Animal manures also vary in value. Stall-fed animals, or those which eat the richest food, produce the strongest manure; and one load of this manure, abounding in ammonia, would probably go as far in decomposing peat and rendering it soluble, as two loads of manure from stock fed only on straw or poor fodder of any kind. Various persons have used muck compost; but perhaps the most accurate experiments with muck compounded with animal manure, were made by Lord MEADOWBANK, forty years ago. According to his trials, a compost made of one part stable manure with two parts of peat, fermented, and thoroughly incorporated together, produced effects on several different kinds of crops, and on various soils, equal to the same quantity of unmixed manure,—whether the latter was applied in a fresh or decomposed state. But we presume the peat in the case referred to was of the best character.

In general we should think "rich mould" which had been washed from "higher lands," would be more valuable than "swamp muck."

We do think "that [peat or muck] compost, when applied to land is more valuable than would be the parts of that compost when applied separately." The vegetable food contained in peat, in its natural state,

is locked up by noxious acids, which are neutralized by the alkalies of animal manures. Thus Dr. DANA observes: "the solubility of geine is wonderfully increased by the action of alkalies."

But we would suggest to our correspondent the advantage of testing these questions by *accurate experiments* of his own; and when these have been made we should be pleased to learn the results.—Eds.

#### New Mode of Setting Posts.

The first, and one of the most important subjects to be considered in the commencement of farming, is that of fences, and as there is no other business that requires more wisdom and economy to ensure success, it is necessary first to determine on good fences in all cases, and then to consider how they may be made good at the least possible expense. As the post and board fence is adapted to more situations and circumstances probably than any other, and as the manner of constructing it is somewhat varied and expensive under any and all circumstances, it may be well to suggest here a new and cheap mode of setting posts, which is the most expensive part in the labor of constructing a good and cheap board fence.

A small pile driver may be constructed so as to fit the bolsters of a common wagon, with the hammer to work immediately behind the hind axle tree; the hammer should weigh about two hundred pounds, to be able to drive large posts with facility, without being too heavy for one horse to draw up without a purchase; the frame work may be so constructed as not to be unwieldy, or much more inconvenient to shift on or off of a wagon than a common hay or wood rack. When in use, the wagon containing the machine must be placed on a line with the fence, with the hammer directly over where the post is to stand, the wheels firmly blocked, and the horses detached. The post, having been sharpened, is raised to its place by the hammer rope, in the same manner as heavy piles are raised, when a few drops of the hammer set it firmer than could be done by digging a hole for the purpose, and with less than half the expense of labor. The horse is then attached to the wagon which is drawn to where the next post is to stand, and the same process repeated. This method may be adopted on all level land with the best success; it is a perfectly simple operation, and so cheap that it only requires an introduction to get it into use in a very short time.

Pile-driving, heretofore, has been very correctly considered a heavy and expensive business; but when we consider the difference between the expense of building and working a machine to drive large piles, thirty or forty feet deep, and another to drive small ones, two or three feet, it will be readily seen that fence posts may be driven, in the manner described above, much cheaper and better than they can be set in any other way. When the posts are set, the boards should be nailed on the middle post with one nail in each, and allowed to lap at the ends from four to six inches. A narrow board should be put up and down the posts to cover the ends of the boards, and pins made of cedar or some durable timber, put through into the posts, passing under the boards to prevent any bad effects from the expansion and contraction of the boards in wet and dry weather, which, though very small in one length, amounts to enough to do much mischief, in loosening posts and breaking nails, in a long stretch of strait fence. The posts should be sawed off at the top, with an inclination downwards from the face, and a short sound piece of board nailed on to carry off the rain. This is the cheapest good board fence that can be made, and should you consider it of consequence, I will give you a plan and estimate of the expense of a machine, and the building of such a fence. DEAN. Lyonsdale.



### The largest Corn-Grower in America.

A writer in the Morgan County (O.) Chronicle, states that he travelled, last season, in company with WILLIAM POLK, Esq., a brother of our President. He was informed by Mr. P. that his crop of corn for 1846, grown on his plantation in Arkansas, was estimated at 100,000 bushels, and that he supposed he was the largest grower of this article in the United States. The writer presumes that he is the largest grower of this grain in the world. His cotton crop was said to have been a failure—he having picked “only between four and five hundred bales.” He kept 200 hogs on his plantation. He was selling corn in New Orleans from 60 to 110 cents per bushel. The follow is an estimate of his products:

His corn was then worth at least	\$70,000
His Cotton do do	16,000
His Pork do do	4,000

Making the aggregate of \$90,000 for three articles *only* of his products. His whole produce is supposed to be worth at least \$100,000 per year. It is stated that Mr. Polk began poor, and had made all he possessed by his own exertions; and in conclusion it is added:—“Here, then, are two planter’s sons beginning the world poor; one is the greatest corn grower in the world—the other holds the first office in the world.”

### “Gutta Percha.”

This is a substance which has been brought into notice within a few years. It is the product of a tree which grows in the East Indies. Prof. WEBSTER, of Cambridge, Mass., has given in the Boston Courier a more particular account of the article and its uses than we have before seen. He has made several experiments with this curious substance, and has prepared from it a variety of articles. At and below a temperature of fifty degrees, it remains as hard as wood. At a temperature a little below boiling heat, it becomes soft, and is then easily cut and moulded into all varieties of form. When it again becomes cold, it resumes its former hardness. It is very tough, and in its ordinary state resembles horn. Prof. W. took a ring made from a slip half an inch wide and one-tenth of an inch in thickness, and found it would support a weight of one hundred and fifty pounds without breaking. It is found to resist the action of water, acids and many chemical agents. It has been used for tubes for the conveyance of gases, for cementing substances; and Prof. W. has had a pair of shoes made from leather prepared in a solution of the substance, and put together without sewing, pegs, or nails; and they are pronounced by the maker stronger than he could make them by the usual method.

In the experiments which have been made for testing the action of water upon the “Gutta Percha,” the water has received no impregnation, has acquired neither taste nor smell, nor has the material been in any way changed, and the tubes have not been ruptured by the freezing of the water in them. All circumstances have induced Prof. W. to believe that it would be preferable to any other article for the purpose of making pipes for the conveyance of water. As yet but a small supply only of the material has been obtained, but it can be had in abundance in the country where it is produced. It is procured by felling the trees from which it is obtained—stripping off the bark, when the substance exudes in the form of a milky juice, which is collected and poured into troughs, where by exposure to the air it hardens. Prof. W. has adopted a mode of dissolving the substance without the aid of heat, which he thinks of advantage. The particulars of his process are not given.

### Carrots as Food for Stock.

At one of the agricultural meetings held in Boston during the past winter, the subject of cultivating “root crops” for stock, was discussed. The general expression was, that the carrot is the best root for this purpose, in situations adapted to its growth. Hon. Mr. Brooks stated that he had made experiments in feeding carrots, and for young stock he thought them as valuable in weight as good hay. He thought they did not produce as much milk, when fed to cows, as potatoes, and hogs preferred potatoes. He considered carrots compared with oats, to be worth 33 cents per bushel when oats were worth 50 cents—that 10½ lbs. of carrots were equivalent to 3 1-2 lbs. of oats. He considered the tops of carrots of sufficient value to pay the expense of harvesting. He put them up in small stacks out of doors, and they kept good till mid-winter.

Mr. Rice said he sowed carrots early in May on light land—usual crop 500 bushels per acre—40 bushels weigh about a ton, and were worth as much as half a ton of hay.

Mr. Proctor said 35 tons of carrots had been grown on an acre at a single crop, and it was not uncommon to obtain 32 tons. Most of the speakers mentioned that the blight had injured their carrots, more or less, of late years.

### Plowing Well.

No farmer, we think, who has ever remarked the inefficiency of the “cut and cover” mode of plowing,—that is, trying to throw over a slice of earth twice as wide as the plow will perform,—will prefer it to the infinitely superior mode of drawing deep, straight, and narrow furrows. “It is not to please the eye only,” says a late practical writer, “that the plowmen of Westmoreland, Cumberland, and other well cultivated counties in England, take so much pains in drawing their deep furrows, as straight as a line can make them, and laying them so compact, that not a crevice between them can be found in fields of many acres, but to favor a perfectly even and uniform covering of the seed sown upon the ground.” We would recommend to the farmer who reads this, to plow the next acre with perfectly straight furrows only six inches wide; and if, after viewing its superiority, he then goes back to foot-wide slices, we shall be very much mistaken.

### Moon Farming.

A correspondent of the Prairie Farmer, furnishes an article of considerable length, in quite a scientific dress, to show the influence of the moon on vegetation, and as a consequence, the importance of sowing seeds at the right time of the moon. Believing industry, energy and good cultivation to be the main causes of success, and not losing the best days of the season in waiting for the right time of the moon, we shall attempt to show the false reasoning of this writer.

He commences by speaking of the effects of light on vegetation—function of the leaves—importance of light—decomposition of carbonic acid—oxygen and carbon—assimilation of carbon—reflection of green rays—mysteries of nature—respiration—agricultural science, &c., and concludes that as light is important to the growth of plants, it is very proper that they should commence vegetation at a time when they can receive all the light possible; that is, in addition to sunlight during the day, they should have the benefit of moonlight during the night. Now it has been demonstrated that the light received from the sun, exceeds that received from the moon, as more than a *hundred thousand to one*. If, therefore, a farmer can find out just how much his young crop will grow in one day of sunlight, he will know about how much it will grow in

a hundred thousand days of moonlight, or about three hundred years, supposing his crop to grow by moonlight every night the year round. And if a hundred days of sunlight are required to perfect his crop, then it would require only about thirty thousand years of moonlight before his crop would be fit for harvesting. Whether this would overbalance the loss of a week or two of fine weather in spring while waiting for the right time of the moon, we must leave the candid and intelligent farmer to decide. A friend at our elbow suggests that Adam's crop of cabbages could not have advanced very far towards maturity up to this present time.

#### Implement for marking Rows—Guano.

I am inclined to offer a notice of a simple contrivance of my own, which I have had in practice for three years, and have found my crops much improved by it. As a planting implement, I consider it an improvement on the old method of furrowing the rows with a plow, which is apt to place the seed too deep in the soil. Instead of a plow, I use a small wedge-shaped harrow, only fourteen inches wide behind, with seven long heavy teeth, but long in proportion. This pioneer harrow cuts deep, and puts the plowed ground in fine tilth to receive the seed, and makes mellow covering for the hoe.

For the last three years I have used the Peruvian Guano, composted with sandy loam, as a top dressing for grass lands—500 lbs. guano to the acre—and have obtained very good results. For corn and potatoes and all planted crops, I run the rows with the pioneer harrow; spread the guano along the rows—then run the harrow again, to incorporate the guano finely with the soil. The germination is accelerated, and the plant has every inducement to a vigorous growth. The after culture is followed closely with the cultivator and the hoe: the results highly encouraging. I obtained last year 62 bushels yellow corn, *shelled*, per acre, from old moss-grown pasture lands, with 500 lbs. Peruvian Guano alone, per acre—the year before 70 bushels corn per acre from the same kind of land; but a moderate dressing of course manure was plowed in in the fall, and then 500 lbs. guano composted, and applied as above at planting time. JONA. BOWERS. *Seekonk, Mass., March 1, 1848.*

#### Account Current with a Cow.

I am no farmer, but I feel much interest in the cause of agriculture. I have often remarked the very inferior stock, particularly cows, of which most farmers in this State keep from eight to ten. I have often asked why they did not keep better cows, and the reply generally has been, "cows are high, and afford no profit." I have always thought differently, and last summer made up my mind to purchase a cow. A friend in the town of Warwick recommended one, ten or twelve years old, called a "native," and I bought her. I have kept a regular and correct account of debt and credit with her, a copy of which I herewith enclose you. I know of no stronger argument that can be used against the idea of the unprofitableness of cows, which I have so often heard advanced in this vicinity, than these statements of *facts*—no *guess-work* about them.

The cow had rather poor pasture. I hired a lot of about two acres, that was sown the year before to millet, *without any grass seed*. But my cow did not arrive as soon as I expected, and the grass and weeds got up considerably. I sold what could be mowed off for \$12. The man who bought it thought there was about a ton and a half when he got it into the barn. Most of the cows in our city run upon the commons, and I am sure the feed there was as good if not better than mine had. I should have let her run out; but she

showed a disposition to go back where I bought her, about ten miles from the city. You see I have bred two calves. The cow had twins—males—which I sold when they were a week old for \$5.

Cow, (Old Warwick) Dr.	Cow, (Old Warwick) Cr.
1847.	1847.
July 29, Cash for self... \$38 00	July 16, By cash for grass off lot.....\$12 00
" 1 bushel meal, 1 00	31, 2 calves, (twins)... 5 00
" Paid for pasture, 10 00	Dec. 31, Milk sold at store of C. & G. from Aug. 2 to date, 62 17
Aug. 20 Oil Cake, 4 69	Cash for milk sold sundry persons within above time 8 86
21, Hay, 10 73	Used in my family 2 quarts per day from Aug. 2 to Oct. 1, 118 qts. at 4c..... 4 72
24, 4 bush. shorts, 92	Do. from Oct. 1 to date, 184 qts. at 5c. 9 20
" 1 " meal, 88	Hay, meal, &c. on hand..... 5 00
Oct. 5, 100 lbs. oil cake, 1 65	Present value of cow,..... 38 00
Nov. 15, 1 bushel meal, 90	
Dec. 6, Meal and Feed, 9 59	
17, 100 lbs. oil cake, 1 70	
23, Brl. meal, Corn and Cob, 1 15	
31, Bal. to new ac't 63 74	
	\$144 95

Jan. 1, By Balance, \$63.74.

Should you wish to have a copy of the account at the end of this year, I will send it. I am pretty confident, however, that the credit for the cow will be increased from the above balance. HENRY R. CONGDON.

*Providence, R. I., Jan., 1848.*

We shall be glad to receive Mr. Congdon's account with the cow for the present year.—Eds.

#### Experiment in the Culture of Corn.

I will venture to give a brief statement of an accidental experiment in the culture of corn. In 1846, I procured some seed-corn of a large twelve-rowed variety, intending to plant it in the same field with an eight-rowed variety, but to keep them separate and thereby to test the relative value of the two varieties; but by accident, after being shelled, the corn got mixed, and was planted in that way. When harvested many of the stalks (one-half I should think) produced two good ears of the usual length. One fact particularly attracted my notice, and which showed the mixture of the two varieties on the same stalk. Many of the stalks which produced two ears had one of eight and one of twelve rows; others two of ten rows; others still, two of eight rows. Thinking that by carefully saving seed from such stalks as had two ears might tend to establish a variety possessing that valuable characteristic, I did so that year, and planted the next year, 1847, entirely from such seed; but my crop that year greatly disappointed my expectations in that respect. Still I think it worth a thorough trial. I would suggest to your readers that several of them make the same experiment this year by mixing two varieties, say eight and twelve-rowed, and plant them together in that way, and communicate the result through the *Cultivator* after next harvest. AN OLD SUBSCRIBER. *Caanan, Ct., March, 1848.*

#### Smith's Patent Lever Drill.

The annexed is a cut of a seed drill for wheat and other grains, invented by H. W. SMITH, of Pennsylvania. Arrangements have been made for manufacturing the machine at Syracuse, by C. MASTEN, of Penn Yan, N. Y., who owns the patent for this state. It is described as follows:

"The axles are of cast iron, extending half the width of the machine, with a flange some six inches in diameter on the end, which, with a cast iron plate of the same dimensions screwed on the wheels, retains the spokes and forms the hub. These wheels and axles may

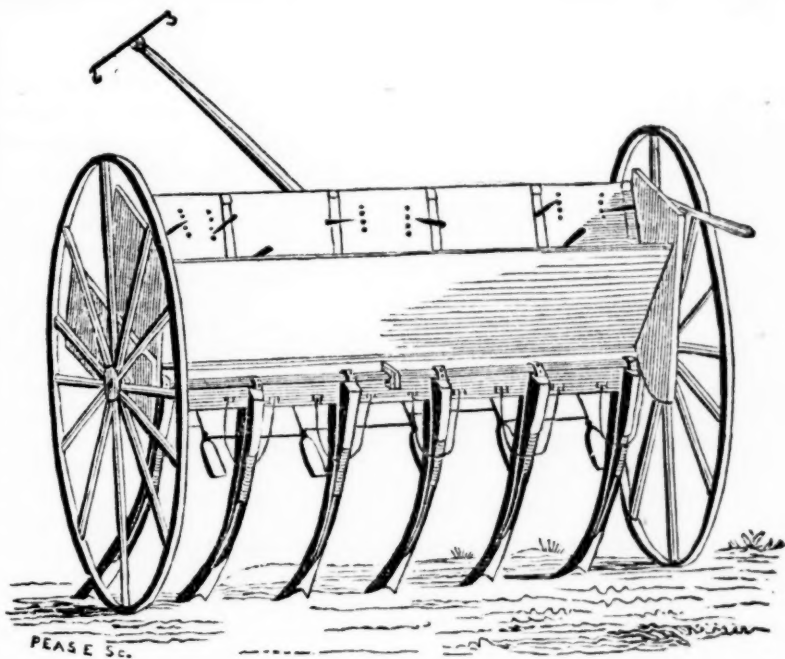


be adapted to carriages, wagons, &c. On the axles are cast also the cylinders, three on each, in which indentations or holes are drilled to carry the grain through valves out of the hopper, a box extending the width of the machine into tubes, through which it is deposited in the furrow. It has a lever by which all the teeth can be lifted out of the ground for the purpose of turning in the field, or passing over a rock, or packing to remove to and from the field by a single operation, and two others to close the valves and shut off the feed at the same time. It has a graduated index, by which it can be set to pass any given quantity of seed per acre, or altered from one quantity to another in a few seconds. The teeth are long to prevent clogging, and can be easily cleared by the operator in case they should gather grass, &c. They are bent something like cultivator teeth, and are made to cut a furrow three inches wide at the bottom, where the seed is deposited at any required depth through the tubes which are fastened to the back of the teeth, six in number, and the furrows are cut nine inches from centre to centre; the depth can be adjusted by a regulator, in which the end of the pole is inserted. After the seed is deposited, the earth falls back and covers it. With this machine, a boy and pair of horses, ten acres per day are readily planted, and five pecks of seed are equivalent to two bushels per acre sowed broadcast; with the drill machine the seed is distributed evenly, and is buried at a uniform depth, and every sound seed vegetates.

#### Management of Manures.

As economy in the accumulation and application of manures is a subject of almost paramount importance to the farmer, permit me to offer a few thoughts, as it is by an interchange of views that the farming interest is most likely to be promoted. In the first place, the dimensions of the barnyard should be adapted to the amount of stock to be wintered. The barn being sufficiently capacious, I would advise that all the products of the farm be housed. The farmer can then consult his interest, either to thresh his grain in the fall or winter; but supposing a part at least to be threshed in the fall, the overplus of straw, after littering the yard to the depth of a few feet, should be nicely stacked. This littering lays the foundation for the absorption of all liquids consequent upon the yarding of stock. As the winter advances recourse should be had, as occasion requires, to the straw stack, that a clean bedding may be provided for the stock; and then if suitable sheds are connected with the barn, sufficient protection is afforded during the inclemency of winter. The advantage arising from this mode is, all is saved, and this mixing up of straw with the manure of animals, makes an excellent compost for hoed crops the ensuing spring.

Now to its application. I very much doubt the propriety, on the score of economy, of some who heap up the manure in the yard to rot, or of others who draw and stack it in the fields for the same purpose, and are subjected to the additional expense of shoveling and carting it twice; it also having been ascertained that a good share of its fertilizing properties escapes during fermentation. My plan is to let it remain until just previous to plowing my ground for corn, which, by the



Smith's Patent Lever Drill—Fig. 44.

by, I do not do until about the time for planting, and then haul, and spread and plow it under—plant my corn, and by time the corn is up the manure passes through the stage of fermentation, which greatly accelerates its growth. By adopting this method in the first place, you not only save all, but in the second place you have the full benefit of its fertilizing and enriching properties. And then by planting the early varieties, if in a wheat growing district, the corn can be taken off when the ground is in a fine condition to be sown to wheat. If otherwise, it will be in the best possible condition for any spring crop. W. ANSLEY.

Potter, Yates Co., March, 1848.

#### Book-Farming—Potato Disease—Large Pigs.

People may say as much against *Book-farming* as they please, yet I think it is a fact, (and I am not the only one that thinks so,) that the town of Cheshire is worth thousands of dollars more than it would have been if there had never been an agricultural paper taken and read by the inhabitants. Since the Agricultural Society of New Haven County was re-organized, some ten or twelve years since, Cheshire has taken more than double the premiums on farms of any other town in the county; it has taken the first premium on five different farms, the second and third on two or three others. And as for stock, dairy products, grain, vegetables, fruit, &c., there is not a town in the county that can go ahead of Cheshire. And why is it? I will tell you. All the principal farmers in the town read the *Cultivator* or some other agricultural paper. Why, there is one piece in the February number, I think worth more to each reader of the *Cultivator* in all New England than the volume costs—I mean the article entitled "unenclosed lands," by William Bacon. I wish the Legislature of Connecticut, at the next session, would pass a similar law to the one mentioned by Mr. Bacon. I have suffered serious inconvenience and loss by cattle straying at large over the highways, breaking into my fields and door yards.

Last season I planted four different kinds of potatoes, all in one field, applying to each hill a handful of a compost of ashes, lime and plaster, in equal quantities. The tops kept green till late in the fall, and the potatoes were large and fine when dug. The land was tilled, the potatoes were planted, hoed, dug, and housed in every way similarly to F. Holbrook's method

as described in the January number of the *Cultivator*. My cellar is deep and dry, and so warm that there has been no frost in it this winter. The potatoes are still dry, yet they nearly all turn black. They have no stench more than any other potato; but nearly one half are a dried, black, worthless mass for man or beast.

I frequently see notices in the papers of the weight of hogs. On the 8th of January, 1844, I butchered two spring pigs, a sow and a barrow. They were just three hundred days old. The sow weighed 440 lbs., and the barrow 370 lbs., dressed. I bought them at five or six weeks old of my neighbor to try experiments on. They were fed with skim milk or whey, ground corn and rye, with a dessert of apples, after the latter were grown. And I can say that they neither went hungry or dry, wet or cold, except when I poured cold water on them in hot weather.

Cheshire, Feb. 21, 1848. CLAUDIUS ALLEN.

#### Rat-Proof Granary.

In your February number, it is mentioned that a gentleman at Baltimore, Md., wishes for a plan to build a rat-proof granary. In the first place, to hold the required quantity, it should be twenty feet wide and thirty feet long, with fourteen feet posts. The roof and ends should project over eighteen inches, as there should be a window at each end. The projection will prevent the rats from running up and gaining admittance at the windows. The sides should be covered with slats or planks, four inches wide, one and a half inches thick, leaving a space between three-eighths of an inch to allow circulation of air. The covering below the projection should be of southern hard or pitch pine. It may be selected full of pitch at almost any lumber yard, and the floor should be laid with the same kind of stuff, and by having the door boards and threshold as full of pitch as possible, and the latch on the bottom as well as the centre of the door to keep it from warping, you are sure no rats can trouble you, as they cannot get through pine full of pitch, any sooner than cast-iron. It fills their teeth in the same manner it would a rasp. I have a granary covered with southern hard pine, and they have not attempted to get through the planks, although it has been covered nine years. THOMAS ANDREWS. *Smithfield, R. I., Feb. 24, 1848.*

Mr. JACOB TEN BROECK, of Greenport, N. Y., writes in relation to the above subject as follows: "I built a corn-house fourteen feet square, and raised it on short posts on the corners and centre, about two feet above ground; and tried for experiment old tin pans laid on the top of these short posts, upside down, and I have not found a rat to trouble me as yet, which is now about three years. My barn was completely overrun with rats, and I gave them one dose of Punderson & Harris' 'Rat Exterminator,' bought of druggists in Hudson, and they have left me."

#### Best Fowls.

I have quite a flock of fowls of different varieties, and am inclined to think the common dunghill as good as any breed for *layers*; but for the table I prefer larger varieties. My fowls have given me eggs almost every day this month, (December.) They require for food, meat as well as grain. They should also have access to lime, brick-dust and gravel. J. C. SWAN. *Calais, Maine.*

**DRAINING.**—To ascertain whether a subsoil can be benefitted by under-draining, remove the surface soil for a small extent, then dig a hole into the subsoil; if in this hole water soon collects, then the subsoil will be benefitted by draining.

### Domestic Economy, Recipes, &c.

#### Wash for Buildings.

In one of the numbers of the *Cultivator* for 1847, a subscriber asks—"Will coal-tar, put on a roof, prevent the sparks from a locomotive from catching?" [Vol. 4, page 227.]

The following receipt was sent us by a gentleman of New Orleans, who writes that the wash was satisfactorily tested upon the roof of the Phoenix Foundry in that neighborhood. It is not only a protection against fire, but renders brick-work impervious to water. The basis is lime, which must first be slacked with hot-water in a tub to keep in the steam. It should then be passed, while in a semi-fluid state, through a fine sieve. Take six quarts of the fine lime, and one quart of clean rock salt for each gallon of water—the salt to be dissolved by boiling, and the impurities to be skimmed off. To five gallons of this mixture, (salt and lime,) add one pound of alum, half a pound of copperas, three-fourths of a pound of potash, (the last to be added gradually,) four quarts of fine sand or hard wood ashes. Add coloring matter to suit the fancy.

It should be applied with a brush. It looks as well as paint, and is as lasting as slate. It stops small leaks, prevents moss from growing, and renders the work incombustible. B. *Philadelphia, Pa., Feb. 1.*

**CHEAP PLASTER FOR COARSE FINISH.**—Take one part clay, three parts of river sand, mix with a portion of the sand when wet, sufficient quantity of hair—thoroughly mix the whole mass until of a proper consistency, and use as lime mortar.

The above makes a good hard wall nearly or quite as serviceable as lime for inside finish. The above has been tried in this vicinity and endured for years.

Braceville, Trumbull Co., O. F. E. STOW.

**KEEPING DRIED FRUITS.**—In answer to the inquiry in a late number of the *Cultivator*, a correspondent at Fredonia, N. Y., writes—"Give the fruit a thorough steaming, after it is dried, so as to kill the nits of insects; then put them in some secure place where the flies cannot get to them."

**PRESERVING EGGS.**—Pack the eggs to be preserved in an upright earthen vessel, with their small end downwards, and pour over them melted tallow, while it is warm—(not hot.) The eggs should be completely covered, and when the tallow is cold, set the vessel in a cool place till the eggs are wanted. A writer in the *Ag. Gazette* states he has kept them nearly a year, and were found excellent.

**RASPBERRY VINEGAR OR SYRUP.**—Put one quart of best white-wine vinegar, to two quarts of raspberries, not over ripe. Let them steep in the vinegar twenty-four hours; then strain them through a sieve, without pressing the fruit, and pour the liquor so strained on two quarts more of raspberries. In twenty-four hours more, strain it off again, and to a pint of juice put one pound and a half of very fine loaf sugar. Put the above into a jar, and the jar into a pan of warm water, and let it stand till all the sugar is melted, taking off the scum as it rises; then take the jar from the warm water, and when cold, bottle off for use. These directions are given from a correspondent of the *Gardener's Chronicle*.

**WHEEL-GREASE.**—Two parts hog's lard by bulk, and one each of black-lead and wheat flour. We have heard wagons a mile off on a still morning, uttering the most dismal sounds, from the want of a little of this material, and which a very little imagination translated into the words—"meeze-e-ry, meeze-e-ry, meeze-e-ry!"



### Answers to Inquiries.

**WASTE WOOL FROM FACTORIES.**—"A SUBSCRIBER," New Preston, Ct., Wool is similar to horn, in its composition—both containing a large proportion of nitrogen. They are, however, slow in decomposing, and give out their nitrogen in small quantities. Hornshavings, from the comb-makers, have been found useful when applied to Indian corn at the time of planting, at the rate of a small handful to a hill. The sweepings of woollen factories are considered of great value in England, and also in this country, so far as the substance has been tried. We are unable to say what the usual course of managing it is, but we have seen it made up in compost-heaps with muck, and have been informed that after it had laid a year and was then thoroughly worked over, it was excellent as manure. It is best applied near the surface—a burying with a harrow being sufficient. Mr. PRENTICE, near this city, has used large quantities of hair, (the waste of a fur-factory,) in this way. Wool and hair, are of course, nearly the same in principle.

**WHALE-BONE REFUSE.**—G. W. B., New London, Ct. We should suppose the best mode of converting this substance into manure, would be to use it in compost, as above directed for wool-waste, &c.

**BEE-HIVE.**—T. W. Madison, Ind. We have heard Kelsey's bee-hive well spoken of, but have no personal knowledge of it.

**MACHINE FOR WORKING BUTTER.**—J. H. C., Adrian, Mich. The only implement of this kind of which we have any knowledge, is that spoken of in the Cultivator, vol. I, new series p. 340, and figured in vol. III, p. 187, and still further described by J. W. Lincoln, Esq., vol. III, p. 240.

**WOOD FOR FIRKINS.**—J. H. C. Oak, ash, maple, birch, and spruce, are all used in various districts, for firkins. There is not an entire agreement as to which kind is preferable. If the best of "second-growth" white oak, free from sap, can be had, it is probably as good, if not better than any. Old brash oak is porous, and not good for keeping butter a long time. The same may be said of open-grained ash, though the best of ash answers well. A butter-dealer of great experience, in this city, informs us that the best maple, either red, or sugar maple, thoroughly seasoned, makes as good firkins as he ever used.

**"POND MUD."**—E. R., Hartwick, Otsego co., N. Y. The "deposit at the bottom of mill-ponds" is generally similar to what is called "muck," and which is found in various situations. The best manner of using as manure, would be to lay it up exposed to frost one winter, and then make it into compost, as has often been described for muck or peat.

**CHERRIES FOR MARKET.**—E. J. F., Painesville, Ohio. Cherries to be sent far to market, must be picked before they are *dead* ripe—the stems left on. They will thus bear to be put in pretty large baskets, if they are not shaken or jammed on the way. They should be kept in as cool a situation as possible, and when they have reached their destination, should be divided into small parcels, to avoid the tendency to fermentation which exists in large masses.

**HOUSES OF UNBURNT BRICK.**—J. A. L., South Hadley, Mass. So far as we have heard, walls of buildings made of unburnt brick, in the manner described in our March number for last year, (p. 74,) stand well—are not affected by frost, moisture or heat. They have been used more in Canada than elsewhere, and are highly approved. We are not in possession of any important information which we have not already published.

**RAPE SEED.**—"A SUBSCRIBER."—Ypsilanti, Mich.

We do not know of any rape seed for sale. It is not cultivated in this vicinity, and we are not apprized of its having been cultivated to any extent in this country.

**BURNT BONES.**—W. H., West-Bethel, Vt. In burning bones, the gelatine or animal matter, which is valuable as a manure, is consumed, but the earthy matter, which is chiefly phosphate of lime, remains, and is valuable as a manure for many plants, particularly wheat.

**CLAY PIPES.**—We are informed that clay pipes for draining are made by W. K. PRICE, of Middletown Point, Monmouth county, New Jersey. The particular kind is not described, and our correspondent also omitted to state the price.

**PACKING HAY.**—We have received several inquiries in regard to the best mode of packing hay in bales of 300 to 350 pounds, and the best machines used for that purpose. We shall feel obliged if some of our readers who are engaged in this business would furnish us with the information—stating the kind of machine or press preferred, where made, and the price.

### Agricultural Societies.

**RENSSELAER COUNTY, N. Y.**—Next Show and Fair to be held at Troy, 20th and 21st September. This is one of the most spirited county societies in the country. It has offered on this occasion about \$1500 in premiums. The Secretary is SETH H. TERRY, Esq., Troy, who will attend to all communications in regard to the society.

**WINDSOR COUNTY, VT.**—Fair to be held at North Springfield, on the 4th and 5th days of October next.

**CALEDONIA COUNTY, VT.**—Officers for 1848, JAMES D. BELL, President; WM. GRAY, BOWMAN BEMIS, Vice Presidents; ANDREW McMILLAN, Treasurer; GEO. B. CHANDLER, Secretary. This Society paid premiums for the following crops grown in 1847: *Spring wheat*—thirty-five bushels on one acre, and thirty-one rods of ground,—first premium. A second premium was awarded for twenty-seven bushels on one acre. Both crops were of the Black Sea variety. One crop was sown the 20th of May and harvested last of August. *Indian Corn*—109 bushels per acre—planted 24th and 25th of May. A second premium for 200 bushels of ears, one acre. *Potatoes*—324 bushels "good sound potatoes" on one acre. A second premium for 303 bushels on one acre.

**ONTARIO COUNTY, N. Y.**—Fair to be held at Canandaigua 10th and 11th October next. The officers for the present year are JOHN GREIG, President; ELIAS COST, JOS. FELLOWS, J. S. HART, W. H. LAMPORT, HIRAM ASHLEY, Vice Presidents; OLIVER PHELPS, Cor. Secretary; W. W. GORHAM, Rec. Secretary; G. W. BEMIS, Treasurer.

**SENECA COUNTY, N. Y.**—Officers for the present year, JOHN DELAFIELD, President; JOHN D. COE, Treasurer; WILLIAM R. SCHUYLER, Secretary. JOHN KENNEDY, Delegate, to represent the Society at winter meetings of the State Society at Albany. Delegates have been chosen to attend the autumn fairs of the adjoining counties of Ontario, Yates, Tompkins, Cayuga, and Wayne.

**RHODE ISLAND STATE SOCIETY.**—Officers for 1848—JOHN PITMAN, President; JOHN JENCKS, CHRISTOPHER RHODES, WILKINS UPDIKE, Vice Presidents; CHRISTOPHER S. RHODES, Secretary; HENRY W. LATHROP, Treasurer. The next fair of the Society is to be held at Pawtuxet.

**SHINGLE MACHINE.**—Those who are interested in the manufacture of shingles, are referred to the advertisement of Mr. PETERS, in this number.

## MONTHLY NOTICES—TO CORRESPONDENTS, &amp;c.

COMMUNICATIONS received, since our last, from G. W. Brown, An old Subscriber, E. J. Ferris, J. H. Cleveland, Adrian Bergen, E. R., M. Quinby, T. D. Burrall, An old Housekeeper, E. Hammond, C. J., J. C. H. (with Reports on Manures and Culture of Indian Corn,) A Subscriber, W. H., S. A. Law, Wm. Bacon, J. S. Pettibone, J. F. Simonds, G. R. Nebinger, J. Hildreth, A. B. Price, Levi Bartlett, J. B. Burnett.

Our thanks are tendered to H. W. WASHBON, for a cock and three hens of the Creole breed.—To WINTER & Co., Nurserymen, Flushing, for copies of their new Descriptive Catalogue.—To Dr. J. H. WILKARD, for seeds of a very fine Cabbage.—To ———, for Hon. Mr. MARSH's Address before the Rutland county (Vt.) Agricultural Society.—To ———, for Mr. BUCKINGHAM's Report (in the Senate of Massachusetts) on the establishment of an Agricultural Institute, accompanied by a bill for that object.—To Major J. B. DILL, for Mr. Johnson's Address to the Cayuga Agricultural Society.—To Rev. C. E. GOODRICH, Utica, for papers of the Melon and Melon Squash Seeds, described by him at page 159, of this paper.—To W. H. GRAHAM, publisher, New York, for Universal History, Part II.—To Hon. W. B. CALHOUN, Secretary of the Commonwealth, for Transactions of the Agricultural Societies of Massachusetts for the year 1847.—To Hon. SALMA HALE, for his Address before the Cheshire (N. H.) Agricultural Society, at its annual meeting in January last.—To ———, for first Report Montreal Horticultural Society.—To J. W. BAILEY, for Proceedings of Clinton County N. Y. Ag. Society for 1847.—To LEA & BLANCHARD, publishers, Philadelphia, for parts 16, 17 and 18 of Dombey & Son.—To F. KNIGHT, publisher, for Washington's Agricultural Correspondence.

SINGULAR VARIETY OF SQUASH.—We have received from Mr. EDWIN NEWBY, of New-York, a few seeds of a variety of squash which is new to us. The seeds are about the size of those of the common crooked-necked winter squash, but are of a dark-brown color. Mr. N. gives the following description of the squash: "It is rather bell-shaped; weight 20 lbs.; skin very hard, and nearly pure white; flesh, a fair thickness, and almost black, as you may suppose from the color of the seeds. What adds most to its excellence is, it is the driest squash when boiled I have ever met with—it being similar to a mealy potato. From its extreme hardness I have no doubt that it is a good keeper. It was brought, by my express desire, from the Pacific ocean. I hope it will prove valuable in this country."

SCHOOLS FOR ORPHANS.—We have received a communication from Mr. JAMES JENKINS, of Paintersville, Ohio, in regard to the establishment of schools for orphans. We have only room to state, in brief terms, his plan; which is the organization of one school in each county, to be under the general supervision of the Agricultural Society of such county; "the scholars to labor a sufficient length of time for their support, and to defray the expenses of tuition, and spend the remainder of their time in study; and if any should enter too young to support themselves, let them be clothed by the agricultural society, or a charitable association, or an appropriation by the legislature. The course of study should be a good English course, with a thorough theoretical and practical knowledge of agriculture and horticulture. The scholars to remain in the school till eighteen or twenty years of age." We have no doubt that schools for the object named, if

properly established and properly conducted, would be highly useful, especially for affording a good home, and the means of education for the poor orphan children of our towns and cities. The "Farm School" of Boston has rendered great service to this class of population; and the citizens of Boston and vicinity have now taken steps for the establishment of an institution on a larger scale, to be located in a favorable part of the country.

PLEASURES AND BENEFITS OF READING.—Mr. ADRIAN BERGEN, of New-Utrecht, Long Island, observes in regard to the pleasures and advantages of reading—"It appears to me that to teach a man to *make money*, without giving him a knowledge of the proper manner of using it, is coming far short of the object for which our Maker has placed us here. Hence it is not the man who has the most worldly goods, but him that makes the best use of such goods, that most enjoys life. For myself, besides the pecuniary advantage of reading an agricultural paper, I derive a great *pleasure* in it. I find much satisfaction in looking over the back volumes of the Cultivator, (for I have them all,) and am not only interested with the *agricultural* part, but with those pieces which have an excellent *moral tendency*."

OLD CLOVER SEED.—Mr. E. CROASDALE writes—"In the last volume of the Cultivator, page 132, it is said, 'clover seed, kept over one summer, would be dear at half price.' My own experience and that of many others in our section, goes to prove the above assertion an error, and which might be attended with great loss. I have frequently known clover seed that had been kept over one summer, preferred before new seed, provided it had been properly kept."

FARMERS' CLUBS.—We are pleased to learn that a Farmers' Club has been formed in Seneca, Ontario county, N. Y. It was organized on the 15th of February last. We are informed that it has so far operated well, and that its members are steadily increasing. Mr. WILLIAM M. COMB, of Geneva, is chairman of the corresponding committee.

HUSSEY'S REAPING MACHINE.—J. DELAFIELD, Esq., in the report of his farm, states that he uses Hussey's reaper for harvesting his grain. He cut 91 acres last year, and the cost is stated at 41 cents per acre, for reaping, binding, and shocking.

SHEEP IN VIRGINIA.—Flocks of sheep appear to be on the increase in Virginia. We are pleased to see that several gentlemen have made purchases of some of the best sheep at the north, of various breeds, and are paying much attention to the breeding of them. Mr. SAM'L F. CHRISTIAN, near Greenville, Augusta county, has a flock of Merinos, which is said "will compare advantageously with any flock in the United States." Col. J. W. WARE, Clarke county, has a flock of Cotswolds, which are represented as of excellent quality. In a communication to the *Southern Planter*, Col. W. states that he has lately sold some of his Cotswolds to Mr. CHRISTIAN, who intends hereafter to keep both Cotswolds and Merinos—breeding each separate and pure.

DEVON BULL.—By reference to the advertisement of Mr. WILLIAM L. COWLES, in this number, it will be seen that he has a young Devon bull for sale. We had the pleasure of seeing Mr. C's. stock at the Hartford Cattle Show, last fall. He has some excellent Devons. The originals of his herd were obtained chiefly from R. L. COLT, Esq., of New Jersey, though some of



them, we believe, were bred by Mr. PATTERSON, of Baltimore. Mr. COWLES has now purchased the Devon bull *Rover*, formerly owned by L. F. ALLEN, Esq., of Black Rock. He is a fine animal, and has taken prizes at various shows.

**DURHAM CATTLE.**—We would refer those wishing to obtain this description of stock to the advertisement of GEORGE VAIL, Esq., in this number. Mr. V. has left us a memorandum of the weights of two of his calves, as follows: Bull calf of the cow *Hilpa*, dropped August 4, 1847, weighed April 11, 1848, 572 pounds; bull calf of the cow *Lady Barrington*, dropped August 29, 1847, weighed April 11, 1848, 582 pounds. Neither of these animals were in more than fair condition as to flesh.

**CULTURE OF SUMAC.**—A correspondent wishes to know how soon after the seed of this article is sown, a crop can be obtained, and the probable amount it would yield per acre. We should be pleased if some person will furnish the information.

**CATTLE FOR THE DAIRY.**—A writer in the English *Agricultural Gazette*, describing the management of a dairy farm, says—"our meadows are poor and cold, and we require a hardy good milker; to procure which we have crossed Alderney cows with a well-bred Hereford bull, and have many excellent productions from these." Most of the cross-bred stock, he says, prove good milkers, and those which are not, pay well for fattening.

**PLOWING BY STEAM.**—We believe one reason why plowing by steam has not succeeded better, is in consequence of commencing on a wrong basis. The common way of plowing by successive furrows has been adopted, requiring too much locomotion. The engine should be stationary or nearly so, and should work a strip of ground at least 2 rods wide, only moving from the work so fast as it accomplishes a strip of this width. This we believe is the proper principle to begin with; the particular mode of operating must be left to inventors. Its great superiority consists in this, that the force required to move the engine is diminished as much as the proposed width exceeds that of a common furrow.

**MAPLE SUGAR.**—H. French, of Loudon Centre, N. H., states in the Boston Cultivator that he makes from 12 to 1500 lbs. of maple sugar annually, which sells from 10 to 12½ cents per pound. The labor employed in making this amount of sugar, is that of himself, a hired man and a boy, "with an occasional day's work" in collecting sap when there is a "large run." These men, however, it is said, take care of a large stock of cattle, and cut up a year's stock of wood during the "time of sapping." He taps the trees by boring into them to the depth of three or four inches with a three-quarters auger. Instead of using wooden spouts driven into the holes as commonly used, he takes pieces of sheet-iron, four to six inches long and two inches wide, bends them the narrowest way in the form of a half circle, sharpens the edges, and drives them into the bark of the tree under the auger hole. These form the spouts, and catch every drop of the sap. The wooden spouts obstructed the flow of sap, and being frequently cracked or split, permitted some of it to waste.

**S. A. LAW, Esq.**, in his address, states that the county of Delaware contains 31,000 cows, from which there are made, yearly, 1,560 tons of butter—being 800 tons more than the average quantity made by the counties of the State.

**COFFEE.**—The French are noted for making good coffee. The mode of preparing it is to roast the berries (not burn them) over a slow fire, so that the aroma or essential oil is concentrated. By greater heat and more rapid scorching, as is too commonly practiced here, the

qualities which impart flavor are mostly destroyed. The French only allow their coffee to boil up once, and then leave it to simmer in a close vessel till wanted. If it requires fining, ("settling," in common parlance,) a little pounded isinglass is said to be the best. It is best to roast the berries but a short time before using them, and when they are sufficiently cooked, they should be kept till used in air-tight vessels.

### Notices of New Publications.

**AN Universal History of the most remarkable Events of all Nations, from the earliest period to the present time: forming a complete History of the world.** W. H. GRAHAM, New York.

We are informed that "the intentions of the author of this work have been, not only to enlarge the mental faculties, and to elevate the ideas of his readers, but to present the world in a new form, a Universal History, without prejudice and without partiality; being instructive for readers in general, and at the same time worthy of the attention of Philosophers, of Statesmen, of Lawgivers, and of warriors." We have received the first two numbers of the work, and from the attention we have been able to give, should think it well calculated to interest the reader. The style is easy and perspicuous, and the typographical execution of the work is neat and plain.

**TRANSACTIONS OF THE AGRICULTURAL SOCIETIES OF MASSACHUSETTS, FOR THE YEAR 1847.**

This is a work of 277 pages, comprising a digest of the returns made to the State Department from the various agricultural societies in Massachusetts, and published under the supervision of Hon. W. B. CALHOUN, Secretary of State. This is the third volume which has been published on this plan—a plan which we highly approve, as it furnishes in a convenient form the most important results relating to agriculture which are from year to year brought out in various parts of the State.

**THE FAMILY KITCHEN GARDENER.**—Containing plain and accurate descriptions of all the different species and varieties of CULINARY VEGETABLES; with their botanical, English, French and German names, alphabetically arranged, and the best mode of cultivating them in the garden or under glass; with a description of Implements and Medicinal Herbs in general use; also, descriptions and characters of the most select Fruits, their management, propagation and culture: illustrated with twenty-five engravings. By ROBERT BUSH.

The above is a manual of 216 pages, 12mo. The author is a practical gardener, of thirty years experience, and we think his directions for the culture of culinary vegetables, are generally better than those we find in most treatises.

**LETTERS ON AGRICULTURE** from his Excellency GEORGE WASHINGTON, President of the United States, to ARTHUR YOUNG, Esq., F. R. S., and Sir JOHN SINCLAIR, Bart., M. P.; with Statistical Tables and remarks, by THOMAS JEFFERSON, RICHARD PETERS, and other gentlemen, on the Economy and Management of Farms in the United States: edited by FRANKLIN KNIGHT.

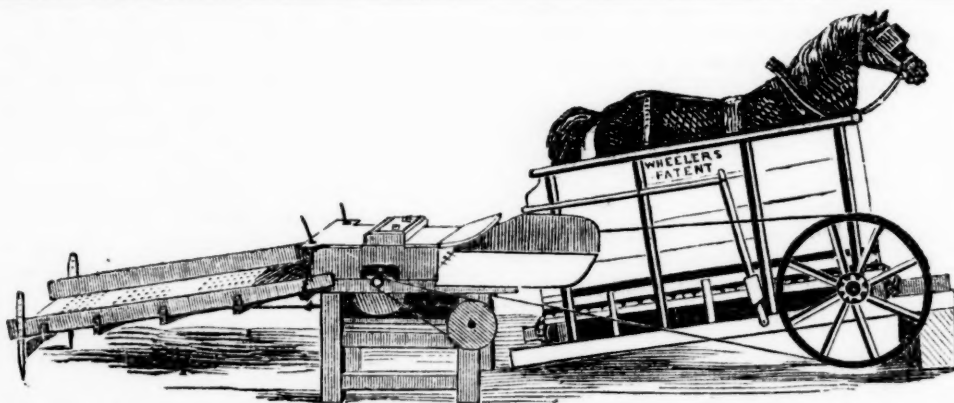
The work before us contains not only the *fac-simile* letters of Gen. WASHINGTON to Sir JOHN SINCLAIR, which have been given to the public in a previous volume, but the entire agricultural correspondence of Gen. W., so far as it could be collected—making a beautiful quarto of 198 pages. It is a work which should be read by every man, and especially by every farmer, in the United States. It presents the character of WASHINGTON in an aspect new to many of our countrymen, and one which it is delightful to contemplate. It has been too common, we think to view him exclusively or chiefly as a warrior; though it is evident that it was the agricultural, rather than the martial

field, in which he was naturally prompted to move—that "rural sights and sounds" were more congenial to his feelings than those of "blood and carnage." His happiness was more promoted by the use of the plowshare than the sword. The weapons of war were adopted, not from choice, but from the necessities of his country, and at her urgent call; and though in this cause they were wielded with energy and success, they were retained no longer than was necessary for the accomplishment of a just purpose.

But we have not, at the present time, space for a lengthened notice of this work, but shall refer to it more particularly in our next number; in the mean time we would cordially recommend it to public attention.

## PRICES OF AGRICULTURAL PRODUCTS.

New-York, April 19, 1848.	
FLOUR—Genesee per bbl.	\$6.50a\$6.66—Ohio and Michigan \$6.18a\$6.25.
GRAIN.—Wheat, Genesee, per bu.,	\$1.35—Ohio, \$1.33—Corn, northern, 53a55c.—Rye, 75a76c.—Barley 75a77c.—Oats, 47a48c.
BUTTER—Orange County, per lb.,	20a23c.—Western, dairy, 15a18 c.
CHEESE—per lb.,	6a8c.
BEEF—Mess, per bbl.,	\$8.25a\$9.—Prime \$5.25a\$5.75.
PORK—Mess, per bbl.,	\$10.12a10.18—Prime, \$8.75.
HAMS—Smoked, per lb.,	9a10c.
LARD—Ohio, per lb., in kegs,	7½c.
HEMP—Russia clean, per ton,	\$230.—American dew-rotted, \$125a\$140.
HOPS—First sort, per lb.,	6a7½c.
WOOL—(Boston prices.) April 18.	
Prime or Saxon fleeces, washed per lb.....	45a50 cts.
American full blood fleeces,.....	40a45 "
" half blood do .....	35a38 "
" one-fourth blood and common.....	28a30 "



## WHEELER'S PATENT ENDLESS RAILWAY

## Horse Power, and Over-Shot Thresher and Separator.

THE particular attention of Farmers is called to the following extracts from correspondents, showing the utility of, and the high estimation in which they are held by the writers and purchasers. The February numbers of the Cultivator for 1847 and 1848, contain full descriptions of them.

For prices see Catalogue of Ag. Warehouse, gratis at Store or by mail to all applicants.

Albany Ag. Warehouse Nos. 10 & 12 Green-street.

May 1, 1848.

HORACE L. EMERY.

## RECOMMENDATIONS.

As to the Horse Power and Threshing machine, my opinion remains unchanged. The principle I like. A short time since I had some laborers to work for me who, on seeing my power, remarked that they had heard that I had a baby threshing machine, from which the horses could eat the straw as soon as threshed. I told them they should judge for themselves, as I should use it the same day. In the afternoon I threshed with my two poney horses (fast walkers) one hundred and twenty-one bushels of oats in the space of one hundred and four minutes, which was the best refutation of the story they had heard that I could offer.

Geneva, N. Y., March 3, 1848.

J. G. STACEY.

All the articles you sent me I am pleased with. Grant's Fanning Mill cleans as well as I could desire—Steven's Hay Cutter performs admirably.

The Horse Power Threshing Machine and Separator will turn out from the sheaf with four hands, one hundred and fifty bushels of wheat per day. Two horses or mules are quite sufficient for the power, running it the whole day or week without a change—200 large sheaves were threshed with it in 17 minutes, making 8 bushels of wheat. With good attention and a little exertion, 200 bushels of wheat can be threshed and cleaned in the best manner from sun to sun with two horses without a change.

Jonesborough, Union Co., Ill.

ELIJAH WILLARD.

Dear Sir—Wheeler's Threshing Machine and Power, &c., which I purchased from you, has proved so satisfactory in every respect that the farmers around me, and all those who have seen it in operation, pronounce it in all parts the most durable, easy, economical and efficient contrivance ever invented.

I have threshed 2000 bushels of grain of all kinds with it, and it is fully up to all it is recommended to do. Many farmers say they would have no other machine for threshing—and I think you will have many orders for them from my neighborhood, as there is nothing like it manufactured in this country.

Lafayetteville, N. Y.

J. N. ROTTIERS.

The Horse Power Threshing Machine exceeds my expectations. With an elevation of only 16 inches I placed on my horses, weighing together 18 or 19 hundred pounds, which gave me sufficient speed to thresh; and as it became a little worn and smooth and well oiled, the speed increased to such a rate that I was obliged to feed it with all possible haste to keep the speed down. I have tested its power and efficiency, and find it to be equal if not supe-

rior to any I have seen both as to quantity and quality of its work, and easy work for horses.

TIMOTHY D. WHITE.

South Hero, Vt., Nov. 19, 1847.

We each have had one of Wheeler's Horse Power and Threshing Machines in use more than a year, and are gratified to say that they have proved all they are recommended to be—and we believe them in all respects, in simplicity, durability, economy, and efficiency the best machines in use. Having threshed all kinds of grain, and sawed a large quantity of wood for ourselves and about the county, &c., &c., we do not hesitate to recommend them to those wishing to purchase.

Schoharie Court House, N. Y.

M. L. CHAFFER,  
AERAM DIETZ.

Dear Sir—I have made thorough trial of the Horse Power and Threshing machine, and do most cordially acknowledge that it works admirably, and gives great satisfaction. I have allowed it to be used by one of my townsmen as a matter of experiment; and he is so well pleased with the operation that he has decided to purchase one the coming season—and I think my having this here may prove to you the means of many sales.

New England Village, Mass., Sept. 24, 1847.

H. H. W. SIGOURNEY.



"KENDALL'S CHURN." The sale of this Churn has been unequalled in the history of Churns. As they are all warranted to work to the satisfaction of purchasers, there is little risk in trying them.

For prices see Catalogue of Agricultural Warehouse gratis at Store, Nos. 10 & 12 Green-street, Albany, New-York, or by mail.

H. L. EMERY.

May 1, 1848.

## VALUABLE BOOKS

For sale at the Office of the Cultivator:

THE HORTICULTURIST, Vol. I, by A. J. Downing—bound in muslin, \$3.50—stitched, in French style, to send by mail, \$3.00.

THE CULTIVATOR, first series, 10 vols. quarto—stitched, \$3.00. Second series, 4 vols. octavo—bound \$1.25 per vol.—stitched, \$1 per vol.

AMERICAN SHEPHERD, by L. A. Morrell—price \$1.25.

THE AMERICAN VETERINARIAN, by S. W. Cole—price 50 cents.

DOMESTIC ANIMALS, by R. L. Allen—price 75 cents.

TRANSACTIONS of the N. Y. State Ag. Society—price \$1 per vol.

AMERICAN AGRICULTURE, by R. L. Allen—price \$1.

Prof. JOHNSTON'S LECTURES on Agricultural Chemistry—\$1.25.

LANDSCAPE GARDENING, by A. J. Downing—price \$3.50. Cottage Residences by the same author—\$2.



## FARM IN MICHIGAN FOR SALE.

I HAVE a good improved farm of 145 acres, three miles from the village of Ann Arbor, for sale. Price \$2200. Also 37 acres improved land one-half mile from said village—price \$1200. Also 20 acres one and a half miles distant, for \$500. Emigrants will do well to give me a call.  
WM. S. MAYNARD,  
Ann Arbor, Michigan.  
May 1, 1848—2t.

## P. SEYMOUR'S BROADCAST SOWING MACHINE.

THE undersigned is manufacturing this machine at East Bloomfield, Ontario County, N. Y., where he will promptly attend to all orders for machines, and all applications for the right to manufacture and vend the same.

This machine is the best implement in our country for the purposes for which it is intended. It sows *correctly* (and any desired quantity per acre) all kinds of grain, from peas to grass seed, including wheat, rye, oats, barley, buckwheat, hemp, clover and timothy seed; also plaster, lime, salt, ashes, bone-dust, &c. It is capable of dusting every square inch on a whole acre of land with less than half a bushel of plaster; and 30 or 40 bushels of lime may be thus evenly applied to the same amount of land if desired. It has recently been very much improved, and is now a very durable article, and recommends itself to every intelligent observer.

P. SEYMOUR,  
May 1, 1848—2t. East Bloomfield, Ontario Co.

## STEEL CULTIVATORS.

THE subscriber having obtained, by deed from the original Patentee, the exclusive right to make and vend Rogers' Patent Improved Steel Self-Sharpening Cultivator teeth in the counties named below, is now prepared at his residence in Vernon to furnish to the farmers of Oneida, Madison, Oswego, Jefferson, Lewis, Chenango, St. Lawrence, Herkimer, Otsego, Broome, Delaware, Schoharie, Montgomery, Fulton, Hamilton, Saratoga, Schenectady, Albany, Columbia, Dutchess, Greene, Rensselaer, Washington, Warren, Franklin, Clinton and Essex, by wholesale and retail, ready made Cultivators or Teeth.

Agents—H. L. Emery, Albany; Henry Warren, Troy; Isaac Tice, Poughkeepsie; E. Gifford, Hudson; John Benedict, Saratoga; J. P. Clute & Co., Schenectady; R. C. Wilson & Co., St. Johnsville; P. & E. Reed, Little Falls; Pierson & Giles, Cherry Valley; Sanger & Benedict, Utica; J. L. Merriam, Oswego; R. Norris, Sacketts Harbor; Calvin Arbour, Watertown.

Vernon, Oneida co., April 8, 1848—1t. ELIJAH WILSON.

## YOUNG DREAD.

THIS celebrated horse will stand the ensuing season at the stable of the subscriber in Mayfield, Fulton county, 3 miles north of Mayfield Corners. DREAD is a beautiful bay, 17 hands high, and finely proportioned. He was at the State Fair at Saratoga, and took the 2d premium there in the first class of horses. Weight, when 4 years old, 1460 lbs. *Now five years old.*

Gentlemen sending mares from a distance may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse and all mares sent will be under the charge of the subscriber. Terms \$10 if with foal, if not \$1. Season, &c. by agreement. All mares put at the risk of the owners of said mares, also escapes.

SIMEON CHRISTIE,  
April 15, 1848—1t. Mayfield, Fulton co., N. Y.

## PITT'S DOUBLE PINION HORSE POWER, SEPARATOR, AND CORN AND COB MILL.

I hereby give notice that I am now making a large number of the above machines, which I offer to those who wish to purchase as superior to any machine of the kind now in use.

For the information of those who are unacquainted with my Separator, I will say it threshes and cleans from three to five hundred bushels of wheat per day, and from six hundred to one thousand bushels of oats, and other grain in proportion.

The machine has proved itself superior to all others for the purpose designed.

It has been exhibited in various parts of the United States at State Agricultural Fairs, also in Canada, and has always taken the *First Premium*.

My Double Pinion Horse Power has been in operation in Western New-York and Ohio for several years past, and is now admitted wherever it is known, for ease, convenience, strength, durability and cheapness of repair, to surpass any other Horse Power.

The Power is so constructed as to entirely obviate the danger and inconvenience of the large spur wheel, so objectionable in other Powers. It may be used to as good advantage with two horses as any two horse power, and is sufficiently strong and durable for eight horses.

Price of Separator one hundred and fifty dollars.  
do Horse Power and Separator complete, two hundred and fifty dollars.

Five per cent. deducted for cash.

The Corn and Cob Mill I have enlarged to about double its original capacity, the teeth have been rendered more durable, which, together with other improvements has greatly increased its value. It is furnished with a hopper to feed loose grain, and a tube to feed corn in the ear.

The Mill gives general satisfaction, is durable, easily kept in order, and for the use intended is acknowledged superior to any other mill.

Price Fifty Dollars.  
May 1, 1848. JOHN A. PITTS,  
Rochester, Monroe Co., N. Y.

## TO MANUFACTURERS OF SHINGLES! ATTENTION!!

THE subscriber in offering his machines to the public, claims them to be superior to any other article of the kind in use. It was patented by Jonathan Bennet in August, 1846, but has been presented to the public only about six months. It obtained the highest premium at the Fair of the American Institute, and the universal demand for it since its presentation to the public, claims its rank far above other improvements in this article. It forms two shingle at each descending motion of the gate, and *each from but to tip*, and the operation of jointing is performed by the knives, by turning the blocks previous to cutting. A more full description may be found in the January number of the Cultivator, page 27, and the sale of his article the subscriber will warrant the before mentioned particulars. Orders for single machines will be promptly executed and forwarded by the subscriber at Kent, Conn., via Housatonic Railroad, and for any part of the United States. Terms for machines and right of use from \$75 to \$100. For county or State rights apply to  
EBER S. PETERS.  
Kent, Conn., May 1—1t\*.

## FARMS FOR SALE IN THE COUNTY OF MONROE, N. Y.

ONE of the handsomest and best farms in the town of Greece, within a mile and a half of Lake Ontario and the mouth of the Genesee river; and distant only seven miles from the city of Rochester and the Erie canal. The farm consists of 192 acres, well watered by an excellent and never-failing stream, and having about 20 acres of wood—commodious stone house, with pump at the kitchen door—frame barn, sheds, &c., and five acres of grafted fruit—and might be divided into two farms of 150 and 42 acres, equally well watered and supplied with fruit. The land in Greece is not surpassed in fertility by any in the State, nor in convenience to markets.

I will also sell the farm on which I live containing 52 acres; with five acres of choice fruit of every variety; good well, and a small but never failing stream; the buildings are of wood, more extensive and commodious than usual for a small farm; for I had fitted this for my permanent residence. The situation is naturally beautiful, well sheltered by shade and fruit trees, and overlooking Lake Ontario and Genesee river. These lands are fitted for wheat or stock raising, or both combined; and a contemplated Plank Road from the mouth of the river to Rochester, and the increase of business consequent on the steamboats and other vessels stopping here, by which a market for all minor articles, and especially for fruit, will be established, renders these farms very desirable.

Price reasonable, and one-third of the amount may remain on mortgage for some years. A considerable breadth of wheat might be put in this year.

Apply personally or by letter to JOHN MOXON,  
May 1, 1848. Charlotte, Monroe County, N. Y.

## TWO FARMS FOR SALE,

HANDSOMELY situated one mile north of Northville in the southern part of Cayuga county, each containing seventy-five acres of excellent land, in fine condition, with good farm buildings, orchards, &c. These farms are divided by the stage road between Auburn and Ithaca, equi-distant from each. They will be sold separately or together.

Apply to DAVID THOMAS, near Aurora, Cayuga county, or to ISAAC JACOBS, on the premises.  
3 mo. 7, 1848.

## PROUTY &amp; BARRETT,

Manufacturers and Wholesale and Retail Dealers in Agricultural and Horticultural Implements, Garden, Grass, Field, and Flower Seeds, 194½ Market-St., Philadelphia,

OFFER for sale an extensive assortment of FARM and GARDEN IMPLEMENTS and SEEDS, consisting in part of the following, viz:—

Prouty & Mears' Patent Centre-draught Self-sharpening, Right and Left Hand, Subsoil and Side Hill, Wheel and Swing PLOWS, with Points and Shares so strong and thoroughly purified and hardened, that 100 acres of land have been plowed with a *single set*.

These Plows are constructed of the best materials, and of the highest finish, and for ease of draught and management, the facility with which their points and shares are turned and sharpened, the eradication of weeds and the thorough cultivation of the soil, they stand unrivalled in the market. They are warranted to work in any soil, and to give perfect satisfaction after fair trial, or they may be returned, and the money refunded.

To these Plows were awarded TWENTY-THREE PREMIUMS at Trial Matches, during the past year, proving incontestably their great superiority over their numerous competitors.

Improved Cultivators, with steel teeth; Harrows, Revolving Horse Rakes, Agricultural Furnaces and Cauldrons, Corn Mills, Sugar Mills, Seed Planters, Corn Planters, Cheese Presses, Ox Yokes, Hovey's Spiral Hay, Straw, and Corn-stalk Cutter; Corn Shellers, Grant's Patent Fan Mills, and other approved patterns.

Spain's Improved Barrel Churn—Constructed in such a manner that the whole reel or dashers can be removed (whole) from the inside; the Churn is then clear of all impediments in the way of removing the Butter, and of a perfect cleaning.

Cast Steel Hoes, Shovels, Spades, Hay and Manure Forks, Scythes, Snaths, Briar Scythes and Hooks.

AGRICULTURAL, HORTICULTURAL AND FLOWER SEEDS, in great variety, raised expressly for this establishment by careful and experienced seed growers, and warranted.

Orders solicited. Philadelphia, April 1, 1848—2t\*

### IMPORTANT TO FARMERS, GARDENERS, AND FLORISTS.

#### *A New Manure, Warranted Superior to any Other.*

MR. BOMMER has on hand one hundred casks—500 lbs. each—of the celebrated "French Guano," an inodorous chemically prepared fertilizing Powder, adapted to every soil and all plants, and acknowledged in Europe as the best and most profitable manure ever known. Price of a cask, \$5.

Families having small gardens or flowers, can be supplied with small bags containing 15 lbs. at 25 cents, or 36 lbs. at 50 cents, at his office 72 Greenwich-st., New-York city.

April 1—1f.

### HORSE POWER, THRESHER, AND CORN SHELLER DEPOT.

ORDERS for the "Warren's and Trimble's best two and four Horse Powers and Threshers," Hand Threshers, Waterman's Corn Shellers, and other Agricultural Machinery, at wholesale and retail, will continue to be promptly attended to, as heretofore, by the subscribers at No. 5 Burling Slip, and 126 Pearl-st., New-York city. Nov. 1, 1847.—St. JAMES PLANT & Co.

### POUDRETTE.

THE LODI MANUFACTURING CO. offer for sale their New and Improved POUDRETTE, at the following reduced prices: One barrel, \$2; three barrels, \$5; and seven barrels and upwards at \$1.50 per barrel. It can also be obtained at their factory, on the Hackensack river, in bulk, at 25 cents per bushel, put on board of vessels or wagons. This is the most economical and effective manure for corn known. On good land, two barrels (\$3 worth) will suffice per acre, and bring a good crop; the labor being less than one half of an application of dung to the hill. Office of the Company, 51 Liberty-street; and of A. B. Allen & Co., agents, No. 187 Water street, New-York. Written communications (post-paid) will be faithfully attended to.

March 1—3t\*.

### ROCK SALT.

THIS Salt is hard as alum, and is the best known for stock, and is the cheapest and most economical—as it may be laid upon the ground, or in racks and mangers, where the cattle lick it as they may desire, without getting an excess, or suffering injury from its use. For sale in any quantity at the Albany Ag. Warehouse, Nos. 10 & 12, Green-st.

### GOOD NEWS FOR THE BLIND!

DR. KNAPP, Occulist, at 493 Broadway, Albany, N. Y., attends exclusively to cases of Blindness, from 9 to 5 o'clock. His method of restoring sight is of recent discovery, and the results have proved that where a person can distinguish day from night, a reasonable hope of recovery may be entertained. The treatment is without an operation.

On application, either verbal or by letter, persons will be designated (residents of Albany) who from being unable to discern any object, some for more than thirty years, (taken blind during infancy,) can now, after treatment, see to walk alone, and see articles as small as a silver pencil.

Those interested will consult the highest good of the Blind by giving such attention to the above as its nature merits.

P. S. Fluid Cataracts removed without an operation.  
April 1—4t.

### ENGRAVING ON WOOD.

THE subscriber is prepared to furnish Engravings on Wood, of all descriptions, at the shortest notice, and upon the most reasonable terms. Also,

#### DESIGNS AND DRAWINGS

of machinery for the PATENT OFFICE, furnished with the necessary specifications.

Inventors of agricultural implements, as well as others who purpose applying for Letters Patent, or wish to have an engraved representation of a machine, will find it to their advantage to call, as the experience of the subscriber enables him to furnish the above in a short time, and at a less cost than is generally charged elsewhere.

N. B. Letters prepaid, containing a suitable sketch and description, attended to. In such cases, a reasonable fee is required.

Room No. 1, Sun Buildings.

A. R. HAIGHT.

March 1—5t\*.

107 Fulton-st., New-York.

### A STOCK AND GRAIN FARM FOR SALE,

SITUATED in Darlington township, Beaver county, Pa., seventeen miles from the mouth of Beaver river, on the road from Beaver to Salem, and Boardman, Ohio, containing near 600 acres; is in two lots, near each other; is well watered, with eight never failing springs. The improvements are two brick and one square log houses. The mansion is in cottage style; is forty-two feet in front; has sixteen apartments, including kitchens and cellars. A frame bank barn, with stone basement, 63 by 35 feet; the corner posts twenty-two feet six inches high. With ample granaries and stabling, and root cellar. Also hay and sheep houses, and sheds sufficient to shelter 900 sheep. A well selected orchard of apples, peaches, cherries and plums. All under fence except about thirty acres. It is well adapted to either grain, wool or dairy purposes. The title is indisputable. It is now well stocked with fine sheep, that will be for sale: for the character of the flock I refer to Mr. Samuel Lawrence of Lowell, Mass., or Messrs. Perkins and Brown of Springfield, Mass. For terms apply on the premises.

February 7th, 1848—3t\*.

JOHN SMART.

### ALBANY AGRICULTURAL WAREHOUSE.

THE subscriber hereby gives notice, that he has disposed of his interest in this establishment to Mr. HORACE L. EMERY, who will hereafter continue the business in his own name, at the old stand, Nos. 10 & 12 Green st., Albany. All demands against the establishment will be paid by him; and all persons indebted to it, are requested to settle their accounts with him without delay.

Mr. Emery has had the entire management of the Albany Agricultural Warehouse since it has been in my hands, and from an acquaintance thus formed with him, and from his long experience in the business, having been engaged in it some ten years, five of which was spent in the establishment of Messrs. Ruggles, Nourse & Mason, at Boston and Worcester, Mass., (the largest in America,) I feel an entire confidence in commending him to the public as one in whose integrity and judgment the patrons of the establishment may safely rely.

Albany, Feb. 1, 1848.

LUTHER TUCKER.

N. B. The publication of the Cultivator and Horticulturist will be continued at the same stand as heretofore.

THE subscriber tenders his thanks to the public for the liberal encouragement and patronage shown towards the establishment since under his management, and hopes with the increasing interest manifested by the agricultural community for improvement and good tools, and constant and persevering attention on his part to the interests of the establishment and its patrons, to merit a continuance of the same. He intends at all times to keep the best of implements, from the best manufacturers of this or other countries; also a full and complete assortment of Grain, Field, Grass, Garden and Flower Seeds; and all business will be transacted as heretofore upon the *One Price System*.

For prices, descriptions, &c., see Catalogue of Agricultural Warehouse, gratis, at Store, or by mail, to post-paid applicants.

HORACE L. EMERY,

Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, N. Y.

### NEW WORK ON THE ROSE.

*The Rose; its History, Poetry, Culture, and Classification.*

By S. B. Parsons. New-York: Wiley & Putnam, pp. 230, royal octavo, with Colored Engravings.

A HANDSOME octavo volume, fully redeeming the promise of its title-page, which the reader will have noted takes in a wide field of practical and classical information. With the practical part of his subject, the culture and classification of the Rose, and with its history to some extent, we expected to find the author somewhat familiar, seeing that he is a well known and successful cultivator. But even in these respects, he has shown an amount of knowledge which we scarcely supposed any individual could have brought to their elucidation; while in the literature of the rose, so to speak, he has brought together such numerous tributes to its beauty, fragrance and emblematical character, as prove no mean acquaintance with the best poets. Indeed, his volume is at once agreeable, instructive, and curious, a very pleasant companion to the mere reader, while to the amateur and the professed cultivator of this most beautiful of Flora's gifts, it will be invaluable.—*N. Y. Commercial Advertiser*

Altogether this may be considered the most agreeable and complete work on the rose in the English language. The author has not only collected and arranged all of most interest and value that has hitherto been written on this subject, but he has interwoven through the volume a good deal of interesting information, drawn from his own experience and observation, which has not before been given to the public. The volume is not simply a practical treatise for the rose cultivator, but a pleasant contribution to the library of the scholar, or the book-table of the lady's boudoir.

The volume contains colored plates of two of the new Roses which have elicited most admiration within the last three years—*La Reine* and *Chromatella*.—*Horticulturist*.

We regret that this beautiful and really valuable volume did not arrive while we had room for a notice worthy of its claims to public favor. All that romance, poetry, and science have endowed the Rose with—all that philosophers have found, and lovers fancied, and ladies felt, about this garner of sweet associations, is here set forth, and worthily; while on two shining pages the beauty herself appears, fairly mirrored in her most magnificent aspect, and seeming only to ask the plucking. We love the book.—*Union Magazine*, by Mrs. Kirtland.

April 1—2t.

### NORMAN.

THIS celebrated horse will stand the ensuing season at the stable of James Rice, in Germondville, three miles north of the village of Lausburgh. Norman is a beautiful dapple grey, 15½ hands high, strongly made, and finely proportioned. He combines first rate trotting qualities, and great powers of endurance, with unsurpassed gentleness and docility. His colts are justly celebrated for speed, bottom and good temper—are eagerly sought after in the market, and command prices ranging from \$150 to \$500. The very high reputation of Norman's stock as "road horses," and the extraordinary prices they command, renders him by far the most profitable horse to breed from of any in the country. Gentlemen sending mares from a distance, may rest assured that they will have such attendance and keeping as the owners desire, and upon the most reasonable terms. The horse will be under the charge of his former owner. Terms—\$10 the season. Insurance to be agreed upon. Communications addressed, I. T. GRANT, P. M., Junction, Rensselaer county, will receive prompt attention.

April 1—4t.



## FINE FARM FOR SALE.

THE subscriber offers for sale a beautiful Farm, of one hundred and sixty acres, under a high state of cultivation, within one and a half miles of the town of Greencastle, Putnam county, Indiana, (the seat of the Indiana Asbury University.) It has been occupied as a sheep farm for the last three years, to which it is well adapted; being all laid down to grass, well watered, with good timber, and limestone in abundance. The barns, fences and out-houses are new and convenient. A fine large orchard, embracing all kinds of choice fruit trees. To a gentleman desirous of educating his family, it offers an opportunity seldom to be met with in the West.

March 1—31.

A. H. NICHOLS.

## THE EAGLE PLOW.



Nourse and Mason.

PROBABLY no Plow has been so long before the public with so few alterations, come into so general use, or received so many, and of so high grade premiums, as the Eagle Plows, from the establishment of Messrs. Ruggles, Nourse and Mason.

Notwithstanding the great diversity of soils, modes of culture, and the increasing competition of many distinguished manufacturers, and year after year having been subjected to the most systematic, persevering and thorough trials ever had in this country, it still stands at the head of the list for excellence of work, materials, workmanship, durability and price.

By referring to the advertisement of the manufacturers in this and the last number of the Cultivator, will be seen the high estimation put upon them by committees and plowmen, as well as their very general use where they have become known.

It is but just here to state, that in the most important trials in New England, the plowmen are required to use the same plows and teams which have been used on their farms, not less than sixty days previous to the trials. The owners are required to hold their own plows, to perform a certain amount of work, usually one-eighth of an acre of a given width and depth of furrows, in a given time. All of which rules and regulations are made known months before-hand, thus avoiding very many difficulties which often arise in deciding who really merit the awards and premiums.

A full and complete assortment constantly on hand and for sale at manufacturer's home prices at wholesale and retail, at the Albany Ag. Warehouse, Nos. 10 & 12 Green-st., Albany, by

April 1.

H. L. EMERY.

## 183 FRONT-STREET, NEW-YORK.

THE subscriber, manufacturer and dealer, has constantly on hand an extensive assortment of Agricultural Implements of the latest and most approved patterns.

Plows adapted to every description of soil, embracing a greater variety of patterns than can be found in any other establishment in the United States.

Moore's highest premium Plows. Two and Three Furrow Plows. Freeborn & Hatchcock's do. Side Hill and Double Mold do. Minor, Horton & Co's do. Cultivators with Steel and Cast Ruggles, Nourse & Mason's do. Teeth. Prouty & Mear's do. Harrows, plain and double hinged Subsoil do. Garden & Canal Wheelbarrows.

Single and Double Corn Shellers, price \$5 to \$10. Straw Cutters, Greene's, Steven's, Sinclair's, and other approved patterns.

Mills for grinding Grain. Corn and Cob Crushers.

Horse Powers and Threshing Machines.

Fanning Mills,	Revolving Hay Rakes,
Rice do.	Hay and Manure Forks,
Coffee Hullers,	Scythes & Snathes,
Sugar Mills,	Ox Yokes and Bows,
Grain Cradles,	Log and Trace Chains,
Seed Sowers,	Spades and Shovels.

Plow Castings, Castings for Horse Powers, Mill and Gin Geer, &c. &c. Also on hand and made to order, every description of Brass, Copper and Iron Wire, Cloth, Sieves, Screens, Riddles, &c., &c., all of which will be sold as low as they can be purchased at any establishment in the country.

JOHN MOORE,

Ag. Warehouse, 193, old No. 183 Front-st., New-York.

April 1—31

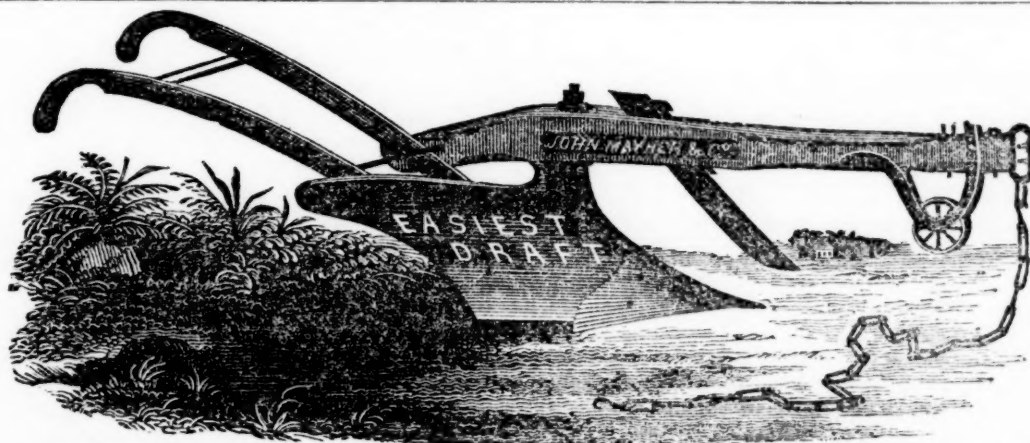
## THE GENUINE MORGAN HORSE,

GENERAL GIFFORD, will stand the ensuing season on Mondays, Tuesdays and Wednesdays, at the stable of George A. Mason, two miles northeast of Jordan; Thursdays, Fridays and Saturdays at the stable of D. A. Munro, Camillus.

Terms—\$10 the season. Insurance to be agreed upon. Pasturage furnished by either of the subscribers at reasonable prices. Escapes and accidents at the risk of owners. General Gifford was sired by Gifford Morgan. His dam a pure Morgan. Breeders of good horses are invited to call and see him.

April 1, 1848—31.

MUNRO &amp; MASON.



## JOHN MAYHER &amp; Co's.

Highest Premium Improved Eagle Plow, Manufactured and sold at the United States Agricultural Warehouse, 195 Front-St., N. Y.

THESE Plows combine new and important improvements, adapted to the different qualities of soil, and the various modes and systems of culture. Their Eagle Plows, as improved, are much longer; the mould board, landside, and share, are extended without any addition to the draught of the plow, thus adapting this plow to the more perfect turning and running under the green sward, and inverting the furrow slice, so desirable in green sward plowing—the principle of these plows is such, from where the furrow is received upon the mouldboard to where it leaves it, that it enables the plow to take up the furrow slice with the greatest possible ease, bearing equally and lightly upon the whole surface of the mouldboard, turning it over with the least possible bending or twisting, and preserving it flat, smooth and unbroken; laying the furrow slice closely and compactly side by side, and creating but slight friction upon the face of the mouldboard. Passing through the soil thus, the plow requires very little power of draught beyond what is required to cut out the furrow slice. In testing the quality of these plows, the power by which they are moved—the ease with which they are handled, and the manner in which they complete the work, are three important points, all of which are wisely, accurately and judiciously preserved. The character of these plows for ease and draught and management, and the excellence of their work, though well established in the minds of the community, was most fully exhibited to the public at the grand trial of plows by the American Institute at Harlem and Long Island October, 1847, where the able and impartial committee awarded the highest premium to J. Mayher & Co., for the best plow for doing the best work with the least draught, (in a trial open to the

whole Union,) running in its natural course, and keeping in its true position without any effort of the plowman, and turning a furrow 12 inches wide and 6 inches deep, with a much less draught than any other plow on the ground, among which were the Bergen Plow, Minor and Horton Plow, John Moore's Plow, and B. Myers' Plow, of Newark. The Eagle Improved Plow of J. Mayher & Co., was at the late trial pronounced by the committee and experienced farmers to be the nearest perfection of any implement of the kind in this country, in respect to materials, workmanship, and in form of construction. The castings are of superior kind, they are made out of the strongest kind of cast iron, the point and edge of the share and base of the landside, are steel chilled hardened, and will wear out six shares and landsides of the common plows; the workmanship of this plow is nothing inferior to any in the country; the timber of which it is made is the best of white oak; every farmer knows that timber in his plow is of the utmost importance—all of which in fact renders the Eagle Plow the very article every farmer wants. The high character of these plows is abundantly sustained by a continued and extended patronage, which the manufacturers hope by their efforts and exertions to retain. Being experienced Plow Makers, they will not spare any exertions to render their plows superior to all others.

They have also for sale over one hundred different kinds of plows, all of the latest and most improved kinds, together with the most extensive assortment of Agricultural Implements ever offered in the city of New-York, among which may be found a large assortment of Harrows, Cultivators, Wheelbarrows, Ox Yokes and Bows, Shovels, Spades, Hay and Manure Forks, Rakes, Hoes, Scythes, Snathes, Cradles, &c., &c., all of which they will sell cheaper than they can be purchased in any other store in the United States.

JOHN MAYHER &amp; Co.,

United States Ag. Warehouse, No. 195 Front-st., N. Y.

March 1, 1848—31.

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## WATER PIPES FOR HYDRANTS, PUMPS, &amp;c.,

Of	in. calibre, and	wg. from 1 lb.	8 oz. to 3 lbs.	8 oz. per yd.
"	do	do	1 14	6 do
"	do	do	2 8	8 do
"	do	do	3 8	10 do
"	1	do	5 10	14 do
"	1½	do	6 12	17 do
"	1½	do	11	19 do
"	2	do	16 12	27 do
"	2½	do	23 8	50 do
"	3	do	28	59 do
"	3½	do	45	80 do
"	4	do	49	90 do
"	4	do	waste pipe.	15 14 do
"	4½	do	do	17 4 do
"	5	do	do	34 do

Prices of the above pipe 7 cents per lb. A. B. ALLEN & Co.,  
May 1—21, 189 & 191 Water-street, New-York.

## ASHES FOR SALE.

THE subscriber has on hand at his Soap and Candle Manufactory in Cabotville, situated a few rods from the Railroad, and a short distance from the Connecticut river, Six or Eight thousand bushels of LEACHED ASHES, mostly from hard wood, which are constantly accumulating, and which will be delivered on board a boat, or the cars, on reasonable terms—affording an excellent opportunity for Long Island farmers, or others having access to railroad or water communication, to improve their lands. For further particulars address  
G. M. BIGELOW,  
Cabotville, Mass.  
May 1, 1848—61.

## BURRALL'S SHELL WHEEL PLOW.

THESE Plows run *thirty per cent lighter* than the common plow, and work well on all soils, in all conditions.

An impression has gone abroad that they answer only "on smooth lands where there are no stones, or other obstructions." Such is not the fact—they make good work on all lands, rough or smooth, and are more fully appreciated among roots or stones, and on stiff clay, and hard gravelly soils. Two thousand of them have been in use during the last three years among our best farmers, and give entire satisfaction.

For sale wholesale and retail (warranted) an assortment of the above (from No. 3 to 12) capable of turning a furrow of from 10 to 20 inches wide, and from 6 to 14 inches deep. A liberal discount to dealers.  
E. J. BURRALL.

Geneva, April, 1848—61.

## FIELD AND GARDEN SEEDS.

POLE and Dwarf Beans, Beet and Mangel Wurtzel, Cabbage, Carrot, Cucumber, Melon, Onion, Peas, Pumpkins, Radish, Ruta Baga, Squash, Tomato, Turnep, and a great variety of other Seeds of the best kinds for sale at the New-York Agricultural Warehouse and Seed Store, 189 and 191 Water-street, New-York.  
May 1, 1848—11. A. B. ALLEN & CO.

## DEVON BULL FOR SALE.

THE subscriber offers for sale a full blood Devon Bull, one year old in March last. He is a fine animal, got by a bull bred by G. Patterson, of Maryland, and out of a superior Devon cow. The price will be \$75 if applied for soon. Address, post-paid,  
W. L. COWLES,  
Farmington, Conn.

May 1—11.

## IMPROVED STOCK FOR SALE.

THE subscriber will take orders and execute them in the best possible manner, for—

Durham, Hereford, Devon and Ayrshire cattle. Price from \$50 to \$300 each, according to age and quality.

Saxon, Merino, Southdown, Leicester, and Cotswold sheep. Price from \$10 to \$30 each.

China, Sussex, Berkshire, and Lincoln pigs. Price per pair at three months old for the three first mentioned breeds, caged and delivered on board ship, \$20. Price of the Lincolns, \$30 per pair. These last are of a recent importation—color white, and grow very large.

All orders must be accompanied with the cash.

SAMUEL ALLEN,  
mjulysept. 189 Water-street, New-York.

## SHORT-HORN DURHAMS FOR SALE.

THE subscriber has a few young thorough bred Durhams on his farm two and a half miles from Troy, which he offers for sale, viz: 1 two year old bull—1 yearling bull—2 do. about eight months old—6 yearling heifers—2 two year old do.—and a few spring calves, bulls and heifers. These young animals were all got by my imported bull Duke of Wellington and my premium bull Meteor. Meteor was got by bull Duke of Wellington, out of my imported Duchess heifer.

The dams of some of these young animals, were imported; but from other herds than that of Mr. Bates; and others are from Durham cows, bred in this country, and are good milkers. The sires being from the celebrated herd of Thomas Bates, Esqr., (England,) renders them valuable for a cross on other Durham stock, as well as to farmers who wish to improve their herds. The estimation put upon this strain of blood by those who know its value, may be estimated by stating that the only bull calves which I have had to dispose of from the Bates cows and bulls, (three in number, have sold at \$300 each. The young animals above enumerated will be sold at prices ranging from \$100 to \$150.  
GEO. VAIL.

Troy, May 1st, 1848—11.

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May 1, 1848—11.

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May 1—11

## THE CULTIVATOR

Is published on the first of each month, at Albany, N. Y., by  
LUTHER TUCKER, PROPRIETOR.

LUTHER TUCKER & SANFORD HOWARD, Editors.

\$1 per ann.—7 copies for \$5—15 copies for \$10.  
Payable always in advance.



